

City and County of San Francisco
Department of City Planning

Supplemental
Environmental Impact Report

1145 Market Street Office Building

Final
81.549E

Publication Date: August 9, 1985
Public Comment Period: August 9 to September 12, 1985
Public Hearing Date: September 12, 1985
Certification Date: July 31, 1986

SCH No. 85081307

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**CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF CITY PLANNING**

**SUPPLEMENTAL
ENVIRONMENTAL IMPACT REPORT**

**1145 MARKET STREET
OFFICE BUILDING**

**FINAL
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Changes from the text of the Draft SEIR are indicated by solid dots (●) at the beginning of each revised sentence, paragraph, section, graphic or table.

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I. INTRODUCTION

PURPOSE OF THIS SUPPLEMENTAL EIR

A. HISTORICAL OVERVIEW

This supplement to the environmental impact report (EIR) for the 1145 Market Street Office Building (81.549E) has been prepared to provide additional information about the cumulative effects of the proposed project when considered in conjunction with other development in the downtown.

1. SFRG v. CCSF

In March 1982, San Franciscans for Reasonable Growth (SFRG) filed suit under the California Environmental Quality Act (CEQA), challenging the San Francisco City Planning Commission's (CPC's) certification of EIRs for, and approvals of, four other downtown office buildings.¹ The trial court upheld the CPC's actions in July 1982. SFRG appealed the decision to the California Court of Appeal, First Appellate District. (San Franciscans for Reasonable Growth v. City and County of San Francisco (1984) 151 Cal. App. 3d61 (SFRG v. CCSF). The appellate court found the EIRs to be inadequate and incomplete because the CPC "omit(ted) from its calculations and analyses of cumulative impacts other closely related projects that were (con)currently under environmental review" and therefore "failed to interpret the requirements of a cumulative impact analysis so as to afford the fullest possible protection of the environment." (151 Cal. App. 3rd at p. 81).

¹The four projects listed in the lawsuit and subsequent judgments are the buildings at 101 Mission (EE 79.236, certified August 27, 1981), 160 Spear (EE 80.349, certified February 11, 1982), 1 Sansome (EE 78.334, certified August 6, 1981), and Montgomery/Washington (81.104E certified January 28, 1982).

The court remanded the four cases to the trial court with direction that it require the Planning Commission to redraft the EIRs for all four projects in compliance with the requirements of CEQA as expressed within the appellate court's opinion. On December 6, 1984, Supplemental EIRs for the four projects, containing a modified cumulative impact analysis methodology, were certified.

2. 1145 Market

On October 20, 1983 the San Francisco City Planning Commission (CPC) certified the Final EIR for the project Motion 9836M) and approved the project (Motion 9837M). On October 11, 1984, the Bureau of Building Inspection approved the site permit for the project. On October 22, 1984, prior to filing or posting of a Notice of Determination by the Department of City Planning, San Franciscans for Reasonable Growth (SFRG) filed an appeal with the Board of Permit Appeals challenging the issuance of the site permit. The Board of Permit Appeals has continued a hearing on the appeal pending completion of a Supplemental Environmental Impact Report.

3. Downtown Plan EIR

On October 18, 1984, the CPC certified the Final EIR on the Downtown Plan. The Downtown Plan EIR's cumulative impact analysis methodology differs from the analysis in previous EIRs for downtown office projects. Rather than projecting cumulative impacts based on a list of proposed, approved and under construction office and retail projects, the Downtown Plan EIR forecasts total downtown employment through the year 2000. Cumulative impacts were based on the demand by downtown employers and employees for commercial space, transportation and other services, and housing.

B. SCOPE OF SUPPLEMENTAL EIR

The analysis of the cumulative effects of downtown office development in the Final EIR on the project was based on a list of projects which had been approved or were under construction totaling 17.3 million square feet of net new office space.

This report modifies and supplements the cumulative impact analysis in the EIR published May 20, 1983 and certified October 20, 1983 (hereinafter called FEIR). It contains analyses of the cumulative effects of the proposed project on transportation, air quality, energy and housing replacing appropriate sections or subsections of the FEIR.

One analysis of cumulative effects of downtown projects in this Supplemental EIR is based on a list of projects under formal review, approved, and under construction as of March 22, 1985. These projects contain a total of approximately 20.4 million square feet of net new downtown office space. The process used to develop the cumulative list and the list of projects appears in Appendix B, pages A-3 through A-13. This is the most recent list of cumulative downtown office development projects prepared by the Department of City Planning.

In addition to updating the FEIR to reflect a greater number of current and upcoming downtown projects, this Supplemental EIR also presents a revised cumulative analysis of the transportation, air quality, energy and housing impacts of the project using the cumulative analysis prepared in the Downtown Plan EIR. Subjects not covered in this Supplemental EIR are specific to this project and are not affected by changes in cumulative development projections for downtown San Francisco or cumulative analysis methodology.

A complete discussion to the relationship between the two methods is contained in Chapter V, Section A: "Introduction of Cumulative Impact Analysis." Each analysis has been performed independently and can stand alone as an estimate of cumulative impacts. Where the results vary, an explanation of the reason for the variation is provided.

II. SUMMARY

A. PROJECT DESCRIPTION

The 1145 Market Street Office Building project would consist of a 12-story office building located on Assessor's Block 3702, Lots 44 and 44a, on Market Street midblock between Seventh and Eighth Streets.

The building, as currently designed, would contain approximately 145,200 gross square feet (gsf) of floor area with an FAR of 10:1 consisting of about 137,200 gsf of office space and 8,000 gsf of retail space. The building would be 176 feet high, 13.5 feet lower than the project described in the FEIR.

No on-site parking would be provided. Access to a single off-street truck loading dock would be from Stevenson Street. Completion of construction is expected in late 1987. At present, no space in the project has been leased or committed to tenants.

B. ENVIRONMENTAL IMPACTS

Introduction to Cumulative Impact Analysis

The cumulative impact analyses in this EIR use two different approaches for estimating future transportation, air quality, energy and housing impacts:

- o The Downtown Plan EIR forecasts to the year 2000, and
- o The March 22, 1985 list of projects in the greater downtown area.

There are several differences between the two approaches. The basic difference is that the Downtown Plan EIR approach accounts for future changes to a range of land uses as well as changes over time in worker characteristics and behavior, while the list-based approach uses known projects of certain types to represent future activity and assumes

unchanging characteristics and behavior. As a result of this basic difference in approach, the Downtown Plan EIR forecasts incorporate changes over time in employment densities, residence patterns, and travel patterns, whereas the list-based approach applies current conditions to all future activity. These two approaches are alternative means of assessing the future cumulative context for downtown development.

According to the Downtown Plan EIR forecasts, there would be a net addition of 21.7 million sq. ft. of space in all land uses in the C-3 District between 1984 and 2000. The project would represent 0.7% of this amount.

The March 22, 1985 list of cumulative office development in the downtown area (the C-3 District and adjacent areas) includes a net addition of 21.8 million sq. ft. of office and retail space over the base-line office and retail space in existence at the beginning of 1984. The project would represent about 0.7% of the space in the projects on the list. (See Appendix B, pages A-3 to A-13, for a complete listing of projects on the Cumulative List and an explanation of the list.)

For a more detailed discussion, and a chart comparing the two approaches, see Section V.A., Introduction to Cumulative Impact Analysis, pages 36-40.

Transportation

Cumulative transportation impacts have been calculated by a cumulative-development list-based method used in most past San Francisco EIRs and by the new predicted employment-based method first presented in the Downtown Plan EIR (certified October 18, 1984). The employment-based model takes into account area-wide housing availability, planned transit system improvements, the effect of congestion on transportation mode selection decisions, and other factors which are expected to change with time, thus giving a more realistic and sophisticated prediction than the list-based method, which assumes no changes in modal split or residence patterns of San Francisco workers between

now and the year 2000. The two methods are not directly comparable because the employment-based method analyzes travel demand generated by all uses in the C-3 and non-C-3 districts, while the cumulative-development list covers travel from only office and retail in the greater Downtown area.

Net new trip generation from the project would be about 3,689 person-trip-ends (pte) per day. About 515 new outbound trips would occur during the p.m. peak period, 310 of these during the peak hour. On the basis of modal splits predicted for the year 2000 by the Downtown Plan EIR, the main peak-period trip contributions would be: to Muni 111 trips, BART 87 trips, walk-only 122 trips and auto-only 126 trips.

The transit demand from the project would represent about 0.1% of the total transit demand under the list-based approach at the time of the buildout and absorption of all projects on the list (mid-1990s) and under the Downtown Plan EIR methodology (in the year 2000). Planned capacity increases of transit carriers, in conjunction with transit ridership increases from cumulative development under the Downtown Plan to the year 2000, would be expected to result in the following changes in transit Levels of Service during the peak period: Muni Northeast Corridor D to C, BART Transbay F to E, AC Transit C to D, Golden Gate Ferry B to A, Tiburon Ferry B to C, and CalTrain B to C. The list-based analysis predicts the following changes in transit Levels of Service during the peak period at the time of buildout and absorption of the list projects: Muni Northeast Corridor D to C, Muni Northwest Corridor D to E, BART Transbay F to D, AC Transit C to D, Golden Gate Bus C to B, Golden Gate Ferry B to A, Tiburon Ferry B to C, and SamTrans D to C.

The proposed project would generate about 130 new pedestrian trips on the surrounding sidewalks during the noon peak hour and about 100 new pedestrian trips to those sidewalks during the p.m. peak hour.

Sidewalk operations on Market Street, currently in unimpeded or better conditions during both the noon peak hour and open conditions during the p.m. peak hour, would remain in

II. Summary

the unimpeded range during the noon peak hour and degrade to the unimpeded range during the p.m. peak hour, (under the list-based approach (at the time of the buildout and absorption of all projects on the list) and under the Downtown Plan EIR methodology (in the year 2000).

Under both approaches, about 0.1% of the Bay Bridge and Golden Gate Bridge peak-period demand would be due to the project. The project would contribute less than 0.05% of peak-period demand under the list-based approach and about 0.1% under the Downtown Plan EIR methodology on U.S. 101 (south of Harney Way) and I-280 (between Alemany Blvd. and San Jose Ave.).

Under either approach, cumulative development would be expected to have no impact on the peak-hour intersection Levels of Service at Sixth and Brannan Streets (currently "F"), Fifth and Bryant (currently "E/F") and Eighth and Bryant (currently "E/F").

The C-3 District would generate demand for approximately 58,000 equivalent daily parking spaces in the year 2000 under the Downtown Plan, an increase of 28% from 1984. Short-term demand would continue to represent about 25% of the total demand. The project parking demand would represent less than 0.1% of the total demand from the C-3 District. The parking supply has been assumed to be about 51,000 spaces. There would be ● a parking deficit of about 7,000 spaces in the year 2000 if vehicular demand occurs as projected.

Air Quality

Traffic generated by cumulative development would increase the total regional burden of emissions in the Bay Area. This increase would not produce increases in ozone concentrations in the Bay Area, although it could produce small increases in ozone at locations further downwind. The project would produce about 0.7% of the air pollution generated by cumulative list projects and about 2% to the total air pollution generated by development as projected in the Downtown Plan EIR in 1990.

Cumulative development-generated traffic could also increase carbon monoxide (CO) emissions on local streets. However, because of ongoing state and federal emissions control regulations, these increases would not cause CO concentrations in future years to be higher than they are currently. Rather, CO concentrations would generally continue to decrease as older, more polluting vehicles are replaced by newer cars.

Energy

Yearly estimated electrical consumption for the projected 21.8 million square feet of additional downtown space at the time of buildout and absorption of the projects on the March 22, 1985 cumulative list (mid-1990s) would be approximately 370 million kWh of energy per year. PG&E projects an increase in annual energy demand over the next decade of about 200 million kWh. The lower PG&E estimate is largely due to a lower development estimate.

The Downtown Plan EIR predicts an increase of about 210 million kWh of electrical consumption per year between 1984 and 1990, and of about 330-350 million kWh of consumption per year between 1990-2000. The PG&E projections and Downtown Plan EIR do not predict energy consumption for exactly the same time period and thus are not comparable.

Residence Patterns and Housing

According to the Downtown Plan EIR forecast, 189,000 C-3 District workers would live in San Francisco in 2000. About 243 of the 537 people working in this building would live in San Francisco, about 0.1% of the total number of C-3 District workers who would be San Francisco residents.

According to the list-based approach, about 237,000 workers in the greater downtown would live in San Francisco after buildout and absorption of the projects on the list. The

1145 Market Street project would account for 262 employees out of 520 project employees living in San Francisco, 0.1% of the total.

Employment growth accommodated by the project and the many other projects considered in either the Downtown Plan EIR forecast or the list-based analysis has implications for the San Francisco housing market. These can be summarized as follows:

- o There would be more people with preferences and increased resources to pay for San Francisco housing, adding to an already strong demand.
- o The housing supply would be expanded in San Francisco. However, the private market is expected to continue to have difficulty producing affordable housing, for many housing market reasons.
- o There would be increased competition for the available housing units. As a result, there would be higher prices/rents for San Francisco housing with continued employment growth than without it.
- o Generally, households with fewer financial resources to pay for housing would make the most sacrifices in adapting to more competitive market conditions. San Francisco currently has and will continue to attract a large number of persons who would be faced with greater difficulty in securing housing.

Cumulative employment growth in downtown San Francisco would have less impact in the context of the rest of the region's housing market. Considering trends in labor force participation, workers per household, housing production and employment growth throughout the region, future workers in downtown San Francisco would not require much larger shares of the region's housing stock in the future than they do now. In the future, the relationship between downtown workers and other workers competing for housing in the region would be relatively similar to current conditions. As part of total regional employment growth to the year 2000, increases in San Francisco employment can be viewed as contributing to regional housing demand and to a competitive regional housing market with relatively high housing prices and rents. A summary comparison of the results of the cumulative impact analyses in the FEIR and the SEIR is included in Appendix G, pages A-45 to A-53.

C. MITIGATION MEASURES

Mitigation measures described in the FEIR as "Measures Proposed as Part of the Project" were part of the project plans and were incorporated as conditions of project approval as were measures imposed in the Motion approving the project. The expanded cumulative impact analyses contained in this Supplemental EIR do not disclose new impacts not covered by mitigation measures previously imposed on the project and uniformly imposed on later projects approved by the City Planning Commission. The mitigation measures are generally imposed on a per-square-foot basis because an individual office building project contributes to the cumulative impacts in proportion to its contribution to additional employment in downtown, which is related to the space provided in the new building. No individual building contributes disproportionately--geometrically--to the overall cumulative impacts. Therefore, insofar as mitigation measures have been imposed on a per-square-foot basis where possible (e.g., Transit Development Impact Fee, Office-Housing Production Program), the project will contribute its appropriate share to the overall measures which combine to reduce cumulative effects of increases in office space downtown. Where mitigation measures are not appropriately imposed by square footage, such as provision of a transportation broker to encourage transportation systems management, all projects similarly situated have had such a measure uniformly required, as has the project covered by this Supplemental EIR. The specific mitigation measures imposed on the project, measures which could be implemented by public agencies and measures not included in the project, are discussed in Chapter VI, page 94.

1. Transportation

A few conditions that mitigate the project's contribution to cumulative transportation impacts were included in the project approval action but not discussed in the FEIR. These measures are reproduced in the text of this Supplement to the FEIR.

- If the City and other local, regional, state and federal agencies were to adopt and implement the transportation improvements described in the Downtown Plan, or were to act to implement transportation mitigation measures described in Section V.E., Mitigation, pp. V.E.4-28 of the Downtown Plan EIR, cumulative

transportation impacts of downtown growth would be reduced. These measures are systemwide measures that must be implemented by public agencies and cannot be implemented by individual project sponsors.

The following measures are not included as part of the project:

Redesigning the project to include less office space would contribute to mitigation of cumulative transportation impacts.

Contribution of fees over and above the present \$5.00 per square foot could mitigate some of the project's contribution to cumulative transportation effects. However, the City Planning Commission has not been delegated the authority to require such a mitigation measure.

2. Air Quality

Measures that would reduce transportation impacts by reducing the number of vehicle miles traveled would reduce cumulative air quality effects.

3. Housing

A requirement to provide housing in San Francisco was included in project approval conditions, thus reducing or eliminating project-specific contributions to cumulative housing impacts in San Francisco. A total of 93 credits was required. By December 1984, the project sponsor had complied with a portion of the required mitigation measures by having constructed or started construction on 32 new housing units counted as 61 housing credits.

4. Energy

The project is in compliance with State Title 24 Energy Standards. In addition, project approval included a requirement to review energy consumption one year after building occupancy and implement reasonable energy conservation measures recommended as a result of that review.

III. PROJECT DESCRIPTION

The 1145 Market Street Office Building project consists of a 12-story office building located on Assessor's Block 3702, Lots 44 and 44a, on the south side of Market Street between Seventh and Eighth Streets, on the edge of the South of Market area of San Francisco (see Figure 1, page 13).

The building, as currently designed, would contain approximately 145,200 gross square feet (gsf) of floor area with an FAR of 10:1, consisting of approximately 137,200 gsf of office space on Floors 2 through 12 and about 8,000 gsf of ground floor retail. Pedestrian access to the building would be from both Market and Stevenson Streets. Access to the single truck loading dock would be from Stevenson Street. The project would contain no off-street parking.

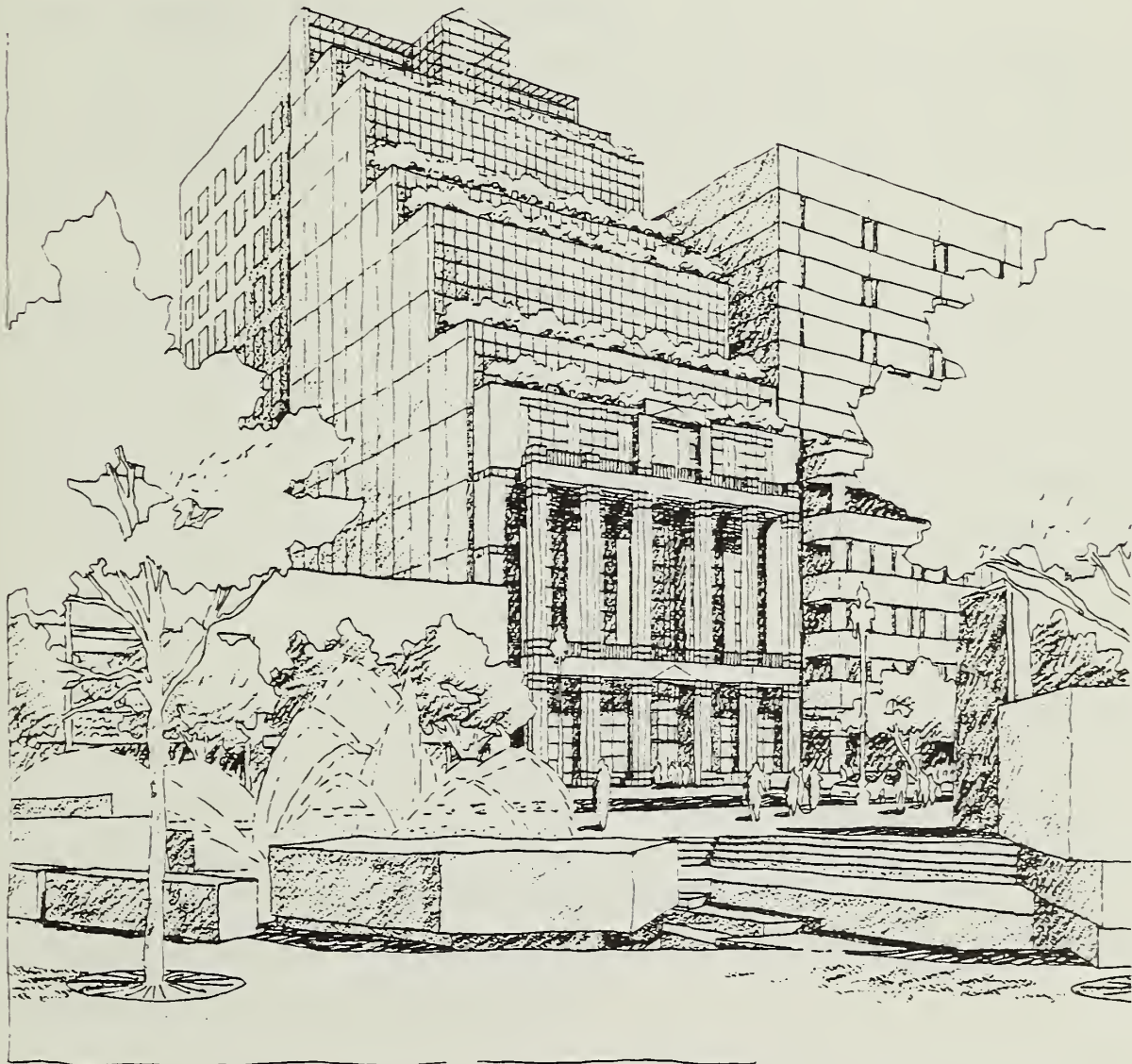
The project would include a series of setbacks along the Market Street facade beginning on the Sixth Floor (about 80 feet above Market Street) and a 5-foot setback above 40 feet along the east lot line. The building facade would be of light grey concrete with clear glass windows and would include a copper-roofed mechanical penthouse.

Construction of the project has begun and the site has been cleared. Completion of construction is expected in late 1987.

The project as finally approved and currently designed involves the following principal differences from the proposed project described in the FEIR:

- o the building's height is 176 feet (12 stories) compared to 189 feet, 6 inches for the proposed project described in the FEIR;

SOURCE: BACKEN, ARRIGONI & ROSS, ARCHITECTS



III. Project Description

- o there is a 5-foot setback above 40 feet along the eastern lot line compared to no setback on the east side of the proposed project;
- o there are five varied setbacks from the Market Street lot line, at floors 6, 7, 9, 10 and 12 compared to the six uniform setbacks in the proposed project; and
- o there is a copper-roofed mechanical penthouse compared to the glass skylight rooftop structure on the proposed project.

IV. ENVIRONMENTAL SETTING

A. LAND USE

Downtown San Francisco and the Bay Area Region

In 1984, it was estimated that the C-3 District contained about 103.5 million gsf of building space over all land uses. About 60% of this space was office space. The next largest share was hotel space at 10 percent of the total, followed by retail at eight percent.¹

The Department of City Planning has compiled data on major office building construction citywide since 1960 (see Table B-3 in Appendix B). According to the City's data, in 1983, there were 64.3 million gsf of space in major office buildings throughout the City. Most of this office space is in the C-3 District. Between 1960 and 1979, office space was built at an average rate of 1.4 million gsf per year. Recently, office construction activity has risen to higher levels. The data compiled by the Department of City Planning show 12.2 million gsf built from 1980 through 1983 citywide, for an average rate of about 3.0 million gsf per year.

Downtown San Francisco is likely to continue to be the major office center in the Bay Area region. Forecasts of development between 1984 and 2000 prepared for the Downtown Plan EIR estimate that an additional 21.7 million gsf of space in all uses would be built and occupied in the C-3 District. Most of this additional space (16.8 million gsf, almost 80 percent of the total) would be office space. According to the Downtown Plan EIR forecasts, the rate of new office construction in the C-3 District would average about 1.1 million gsf per year between 1984 and 2000.²

Those forecasts of development under the Downtown Plan fall near the lower end of the range identified for the five Alternatives to the proposed Plan analyzed in the Downtown

Plan EIR. The total addition of space built and absorbed between 1984 and 2000 would range from 21.3 million gsf (Alternative 5) to 29.9 million gsf (Alternative 2). In all Alternatives, office space would represent the largest component of development. The smallest increase in office space would occur under Alternative 4 (15.4 million gsf), while the largest increase would occur under Alternative 1 (24.4 million gsf).³ Under Alternative 1, the rate of new office construction forecast between 1984 and 2000 would continue at the relatively high level of 1.7 million gsf per year.⁴

The Department of City Planning maintained a list of projects in greater downtown San Francisco for use in EIR cumulative analyses. (See Table B-2 and Appendix B text for a more detailed description of the contents of the list.) The list incorporated all office and major retail projects under formal review, approved but not yet under construction, and under construction in the greater downtown area. As of the March 22, 1985 list, projects which would add about 6.5 million gsf of office space were under formal review, about 4.8 million gsf were approved, and about 9.1 million gsf were under construction. In total, the list includes a net addition to the existing supply of office and retail space of about 21.8 million gsf -- 20.4 million gsf of office space and 1.4 million gsf of retail space in the greater downtown area. About 2.6 million gsf of existing office and retail space would be demolished for construction of these projects. This area covers the C-3 District and adjacent areas, such as the Northeast Waterfront, Civic Center, and the area south of Folsom Street. About 14.6 million gsf of the 21.8 million gsf total are in projects located in the C-3 District.

Land use changes in downtown San Francisco affect the land use economy throughout the Bay Area region to varying degrees depending on the type of land use. In terms of development in downtown San Francisco, office development has the greatest impact on regional land use decisions since the office space market is more regional in nature than markets for other types of space. Other land uses throughout the region are less affected by development in downtown San Francisco than the office market.

Space in office buildings in the other eight counties of the nine-county Bay Area was estimated to be 27 million sq. ft. as of the end of 1979.⁵ While San Francisco has the majority of existing office space in the region, the rapid growth of office functions in

other Bay Area counties has resulted in less than half of the new space in office buildings in the region being built in San Francisco. Forty-five percent of the dollar value of building permits issued for office construction in the region between 1972 and 1979 was for San Francisco development.⁶ Because the average cost per square foot for office construction is higher in San Francisco due to the predominance of high-rise office construction, it can be inferred that the City's share, in terms of square footage of regional office space construction, is less than 45%.

San Francisco's role as a headquarters city and major business center for the West Coast stimulates office growth elsewhere in the Bay Area. As San Francisco firms expand, they look to suburban office markets to accommodate new functions and/or to attract a certain segment of the labor force. Moreover, as the costs of space in San Francisco have increased, due to high levels of demand, cost-sensitive firms have chosen locations in other cities or in expanding suburban locations.

The FEIR (pages 22, 22a, and A-94 - A-96) recognized that in the greater downtown area 113 projects containing about 17.3 million gross square feet of net new office space and about 590,000 gsf of net new retail space were under construction, approved, or under review at the time of certification. All were expected to be completed prior to completion of 1145 Market. Of the 113 projects evaluated in the FEIR, 26 have been built, for a total of about 4.8 million gsf of net new office space and 139,700 gsf of net new retail space. Thirty-seven of these projects have not yet been completed (but it continues to be likely that they will be so prior to completion of 1145 Market). However, more development has occurred than was anticipated in the FEIR as a result of subsequently approved projects. The present list of office/retail projects used for cumulative analysis totals about 20.4 million gsf of net new office space and about 1.4 million gsf of net new retail space (see Appendix B, pages A-3 through A-13 for an explanation and copy of the list).

Site Vicinity

The 1145 Market Street project is located in the C-3-G (Downtown General Commercial) Zoning District (see FEIR, Figure 10, page 20) where the predominant land uses are retail

sales and services such as restaurants, shops, and markets, housing including some of the lowest cost units in the City, and office buildings. The zoning district would not change under the Downtown Plan Interim Controls. The project site is located on the northern edge of the South of Market Area and is adjacent to the Civic Center and the North of Market Area (bounded by Market Street, Van Ness Avenue, Post Street and Powell Street).

Since certification of the FEIR, changes in land uses on sites both in the vicinity of the project site and in the greater downtown area have resulted from construction of projects, some of which were approved or under construction at the time of the FEIR and other that have been approved and built subsequently. In addition, other projects have been proposed which have not yet caused land use changes but may be expected to do so in the future.

The FEIR (pages 18 and 19) described land use and development on the project site and surrounding the project site. Since certification of the FEIR in the area surrounding the project (Assessor's Blocks 347, 348, 349, 351, 353, 354, 355, 3701, 3702, 3703, 3726, 3727, 3728), there have been some land use changes. Two projects have been completed, one is currently under construction, and three projects are currently under formal review by the Department of City Planning. Three of these projects (1170 Market, 1155 Market, and 10 U.N. Plaza), including 270,750 gsf of net new office and 8,800 gsf of net new retail space, were included in the FEIR's cumulative impact analysis. If all of these projects are completed as described in their current applications, an additional 1,362,630 gsf of office space and a net loss of 11,200 gsf of retail space would be in the project vicinity.

The 1155 Market Street project is located on the project block, adjacent to the southwest, to the project site. This project involved construction of 138,700 gsf of net new office space and 8,800 gsf of net new retail space. The 10 U.N. Plaza project, located on Assessor's Block 351, across the street from the proposed project, involved the construction of 92,050 gsf of net new office space. Both of these projects were completed and occupied prior to 1984.

The 1170 Market Street project, directly across Market Street from the proposed project in Assessor's Block 351, is currently under construction. Upon completion, this project will provide 40,000 gsf of net new office space.

The Trinity Plaza (1169 Market Street) project is located on the project block at the corner of Eighth and Market Streets and is currently under formal review by the Department of City Planning. This project would construct 805,000 gsf of net new office space and 40,000 gsf of net new retail space. In the next block, the conversion of 1035-1045 Market is also under formal review. This project would convert 60,000 gross square feet of retail space to 60,000 gsf of net new office space. In addition, the State Office Building on Assessor's Block 347 would contribute 226,880 gsf of net new office space. Since these projects are under formal review they are still subject to change prior to approval of their site permits.

In general, projects on the project block and on blocks near the project site continued the intensification of office development described in the FEIR.

¹ Downtown Plan EIR, page IV.B.17. The estimates of C-3 District building space for 1984 are based on 1981/82 data for the C-3 District collected for the Downtown Plan analysis. The Downtown EIR Land Use Inventory was conducted to provide a base case from which the land use impacts of the Downtown Plan and Alternatives could be analyzed. The Inventory data on C-3 District space by use and subarea are presented in Table IV.B.1, on page IV.B.2 of the Downtown Plan EIR. The estimates of land use change between 1981 and 1984 primarily reflect the projects under construction in the C-3 District as of mid-1982 and are presented on pages IV.B.14 to IV.B.16 of the Downtown Plan EIR. The text discusses the real estate market context for these short-term projections of land use change. It indicates that the amount of office space under construction exceeded the projected demand estimated according to longer-term employment growth forecasts prepared for the Downtown Plan analysis. Therefore, some of the space assumed to be built by 1984 (and included in the 1984 totals identified herein) would be absorbed later in the 1980s. Appendix G of the Downtown Plan EIR provides background for the EIR land use and development forecasts. Section IV.B and Appendix G of the Downtown Plan EIR are hereby incorporated by reference pursuant to State CEQA Guidelines Section 15150. The C-3 District Land Use Inventory is available for public review at the Department of City Planning.

² *Ibid.*, pages IV.B.34-35. This estimate accounts for new construction, as well as demolition and conversion of existing space.

The forecasts presented in this paragraph and the following paragraph for the Alternatives represent space that would be built and absorbed by 2000. Space that will be under construction and not yet occupied in 2000 is not included in the forecasts for 2000 for the Downtown Plan and Alternatives. Therefore, the annual average data from the forecasts are not directly comparable to annual averages for recent short-term (1980-83) office construction, as shown on the list compiled by the Department of City Planning. The short-term data include some projects that are not yet fully occupied.

³ Ibid., page VII.B.4 and accompanying text.

⁴ Ibid., page VII.B.2 and accompanying text.

⁵ Association of Bay Area Governments (ABAG), "Bay Area Office Growth," Berkeley, California, April, 1981, pages 31-62. This number may be an underestimate because the sources for the report apparently do not always include small office buildings.

⁶ Ibid., page 18.

B. TRANSPORTATION

Downtown

Since publication of the FEIR for the project, several changes to the transportation network in the downtown area have occurred. Most noticeable are the Muni route changes. Figure 2, on the following page, shows the existing (1984) Muni system in the downtown area. Also shown are the locations of BART stations. Table 3 of the Transportation Impacts section shows 1984 ridership on transit agencies serving the downtown area. When the data in Table 3 (page 54) are compared to those on pages 33 through 36 of the FEIR, it can be seen that ridership on some transit agencies has been steadily increasing between 1981 and 1984. The comparison also shows that Golden Gate Transit Bus and SPRR (CalTrain) have been experiencing losses of ridership in recent years. Ridership on AC Transit has stayed about the same since the FEIR. Capacity increases have occurred on several of the transit systems, most noticeably on BART, which has implemented a "short-headways" program, and on Muni, which has changed its basic route structure to provide additional zoned express service to the downtown and enhanced feeder service to BART.

Table 4 of the Transportation Impacts section shows pedestrian volumes for 1984. When that table is compared to information included on page 25 of the FEIR, it is apparent that pedestrian volumes on the sidewalks have increased slightly, but not enough to change the pedestrian flow regimen from that reported in the FEIR.

The 1983 San Francisco Cordon Count (JHK and Associates, 1983) shows that vehicle traffic volumes crossing the Metropolitan Traffic District (MTD) boundary have not increased substantially since the last cordon count was conducted in 1965.¹ Thus, traffic conditions in 1984 are essentially unchanged from the 1981 conditions reported in the FEIR.

Parking availability in and near the C-3 district has continued to decline between 1981 and 1984, both as a function of new demand and from loss of existing space to new construction.² As a result of the declining availability of parking, occupancies in parking facilities would be higher than those reported in the FEIR.

MUNI ROUTES IN THE PROJECT VICINITY

FIGURE 2



SOURCE: SAN FRANCISCO MUNICIPAL RAILWAY
STREET AND TRANSIT MAP, JUNE 1984



¹The Metropolitan Traffic District (MTD) is the area roughly bounded by China Basin, the Embarcadero, Fourteenth St., Van Ness Ave., Bush St., Powell St., and Pacific Ave.

²Downtown Plan EIR, pp. IV.E.16-18.

C. AIR QUALITY

The Bay Area Air Quality Management District (BAAQMD) operates a regional monitoring network which measures the ambient concentrations of six air pollutants: ozone (O_3), carbon monoxide (CO), total suspended particulates (TSP), lead (Pb), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2). On the basis of the monitoring data, the Bay Area, including San Francisco, currently is designated a non-attainment area with respect to the federal ozone and CO standards. A three-year summary of the data collected at the BAAQMD monitoring station nearest the project site (about two miles southeast of the site at 900 23rd Street) is shown in Appendix D, pages A-24 and A-25, together with the corresponding federal and/or state ambient air quality standards. In 1984, there was one violation of the federal and state one-hour average ozone standards, one violation of the federal and state eight-hour CO standard, and five violations of the previous state 24-hour average TSP standard; in 1983 there was one violation of the federal and state eight-hour standard, and four violations of the previous state 24-hour average TSP standard; and in 1982 there was one violation of the federal and state eight-hour CO standard, and three violations of the state 24-hour average TSP standard.¹

BAAQMD has conducted two CO "hotspot" monitoring programs in the Bay Area, including San Francisco. One CO hotspot monitoring program was conducted during the winter of 1979-80 at the intersection of Washington and Battery Streets in San Francisco, about 1.5 mile northeast of the site.² The high-eight hour average concentration was 10.1 ppm, which violates the 9-ppm state and federal standards by 1.1 ppm. The high one-hour average concentration of 15 ppm does not violate the 20-ppm state standard or the 35-ppm federal standard. Another CO hotspot monitoring program was conducted during the winter of 1980-81 at the intersection of Geary and Taylor Streets, about one-half mile northeast of the site, and 100 Harrison Street at Spear, about two miles northeast of the site.³ At Geary and Taylor the observed high eight-hour average concentration was 11.5 ppm which violates the standards by 2.5 ppm and the high one-hour concentration was 15 ppm which does not violate the standards. At Harrison Street the observed high eight-hour and one-hour average concentrations were 7.8 ppm and 13 ppm, respectively, which do not violate the standards. These data indicate that locations in San Francisco near streets with high traffic volumes and congested flows may experience violations of the eight-hour CO standard during adverse meteorological conditions.

Comparison of these data with those from other BAAQMD monitoring stations indicates that San Francisco's air quality is among the least degraded of all the developed portions of the Bay Area. Three of the four prevailing winds, westerly, northwesterly and west-northwesterly, blowing off the Pacific Ocean, reduce the potential for San Francisco to receive pollutants from elsewhere in the region.

San Francisco's air quality problems, primarily CO and TSP, are due largely to pollutant emissions from within the City. CO is a non-reactive pollutant with one major source category, motor vehicles. CO concentrations are generally highest during periods of peak traffic congestion. TSP levels are relatively low near the coast, increase with distance inland, and peak in dry, sheltered valleys. The primary sources of TSP in San Francisco are demolition and construction activities, and motor vehicle travel over paved roads.

San Francisco contributes to air quality problems, primarily ozone, a regional problem, in other parts of the Bay Area. Ozone is not emitted directly, but is produced in the atmosphere over time and distance through a complex series of photochemical reactions involving emitted hydrocarbons (HC) and nitrogen oxides (NOx), which are carried downwind as the photochemical reaction occurs. Ozone standards are exceeded most often in the Santa Clara, Livermore, and Diablo Valleys, because local topography and meteorological conditions favor the buildup of ozone and its precursors there.

In 1982, emissions from motor vehicles were the source of 86% of the CO, 46% of the hydrocarbons (HC), 44% of the TSP, and 56% of the nitrogen oxides (NOx) in San Francisco, while power plant fuel combustion was the largest single source of sulfur oxides, about 33% of the total.⁴ These percentages are expected to apply reasonably well to current conditions.

In response to the Bay Area's ozone and CO non-attainment designations, Association of Bay Area Governments (ABAG), BAAQMD, and the Metropolitan Transportation Commission (MTC) prepared and adopted the 1982 Bay Area Air Quality Plan, which establishes pollution control strategies to attain federal ozone and CO standards by 1987 as required by federal law.⁵ These strategies were developed on the basis of detailed subregional emission inventories and projections, and mathematical models of pollutant

behavior, and consist of stationary and mobile source emission controls and transportation improvements. The BAAQMD, MTC, and California Bureau of Automotive Repair (a state agency) have primary responsibility for implementation of these strategies.

¹ State standards for particulate matter changed in 1983 to concentrate on fine particulate matter which has been demonstrated to have health implications when inhaled. Concentration standards also changed. There is not yet an adopted method for monitoring fine particulate matter. Until the State adopts a method, it is not possible to determine what proportion of TSP in San Francisco would be subject to review against the new standards.

² Association of Bay Area Governments, AQMP Tech Memo 33, "Summary of 1979/1980 Hotspot Monitoring Program," Berkeley, California, June 1980.

³ Association of Bay Area Governments, AQMP Tech Memo 40, "Results of the 1980/1981 Hotspot Monitoring Program for Carbon Monoxide," Berkeley, California, January 1982.

⁴ Bay Area Air Quality Management District (BAAQMD), Base Year 1982 Emissions Inventory, Summary Report, San Francisco, California, November 1, 1982.

⁵ Association of Bay Area Governments (ABAG), BAAQMD and MTC, 1982 Bay Air Quality Plan, Berkeley, California, December 1982.

D. RESIDENCE PATTERNS AND HOUSING

Introduction

From the cumulative perspective two aspects of the analysis of housing-related impacts are important--residence patterns and housing market implications. Residence patterns are simply a description, through the use of absolute amounts and percentages, of where downtown workers live. The residence patterns describe workers only; they do not apply to the total population. Analysis of these patterns is useful in assessing the degree to which San Francisco residents benefit from job growth, in estimating travel demand, in considering the relationship between downtown job growth and labor force and housing throughout the region, as well as in considering the housing market effects of development. Residence patterns alone are not a description of housing market impacts in terms of the overall availability or price/rent of housing. In the setting discussion in this Supplemental EIR, the residence patterns of C-3 District workers describe how many C-3 District workers live in San Francisco and what proportion these San Franciscans represent of all employed San Franciscans. The number of C-3 District workers living elsewhere in the Bay Area is also described in this way.

This discussion uses citywide and regional demographic, labor force, and employment data and trends to illustrate relationships that are important to understanding the context for where people live and work. These relationships include the employed population relative to total population, the number of households and housing units relative to total population, employment growth relative to population growth, and the supply of housing in one location relative to others. These relationships, which reflect demographic and housing market factors, are indicators of how and why the residential distribution of C-3 District workers has changed in the past and might continue to change in the future.

The discussion of housing market implications focuses on the link between employment growth and the availability and price of housing, how changes in the housing market could affect various groups of consumers, and how residents' circumstances could change as a consequence of these effects.

As background for the subsequent cumulative impact discussion (Section V.E), this section presents current residence patterns for downtown workers, discusses trends in labor force, employment, and population for the City and the region, and describes current housing market conditions in San Francisco and the region.

Residence Patterns for San Francisco and the Region¹

Current Conditions

In 1984 it was estimated that 159,000 C-3 District workers live in San Francisco. This group represented about 45% of all employed residents of San Francisco. In 1984 most C-3 District workers (55.5%) were estimated to live in San Francisco. The next largest group (73,000 or 26%), lived in the East Bay. About 35,000 (11.5%) lived on the Peninsula and about 19,000 (7%) in the North Bay. While, as mentioned above, these workers represented a relatively large share of the employed population in San Francisco (45%), they represented relatively smaller shares of the employed population in each of the other areas (less than 10% in each) (See Table 9, page 90). Thus, employment generated by future development in the C-3 district would have a greater impact on San Francisco than on other parts of the region.

Changing Conditions and Trends²

The conditions described above are not static, and in fact, have been changing over time. Trends indicate that the number of San Francisco workers who live in the City is increasing. The percentage that they represent of total City employment is declining. Changes in population, housing, labor force, and employment in San Francisco and the rest of the region provide background for these trends.³

Changes in the demographic composition of the City's population have resulted in growth in the number of employed persons (an increase of 24,200 from 1970 to 1980) despite the overall decline in total population (a decrease of 36,700 from 1970 to 1980). The growth of employed persons largely reflects higher labor force participation than in the past since the number of people in their working years (ages 16-64) has been relatively constant.

The number of households and housing units in the City has continued to increase, although by a relatively small amount. Given the population decline, the average number of persons per household has also decreased, while the number of adults and of employed adults per household has increased.

Demographic trends related to the population and labor force characteristics of the region outside of San Francisco show similarities to the trends for the City described above. From 1970 to 1980, the growth of employed persons exceeded the growth of the total population. Employed residents in the rest of the region increased by 670,000 (nearly 45% growth) over these 10 years, while population increased by 588,000 persons (about 15% growth). This reflects both the passing of the "baby boom" generation into their labor force years and the increasing labor force participation of women. The growth of employed residents exceeded the growth of households and of housing units, so that the average number of workers per household increased. The main differences between San Francisco and the rest of the region are the magnitudes of the changes, as the amount of growth in population and employed persons was much larger in the rest of the region than in San Francisco.

In the midst of these changes in population and labor force, business activity and employment have continued to grow in San Francisco. Jobs have grown at a faster rate and by a larger amount than the number of employed residents in the City. Thus, although the number of San Francisco jobs held by City residents has increased, the percent of jobs held by residents has declined. There has been a corresponding increase in the percentage of San Francisco jobs held by persons living elsewhere in the region. This indicates the increasing relative importance of housing and labor force outside of San Francisco to jobs in the City.

When considered from the perspective of City residents, the number of employed City residents working in San Francisco increased from 1970 to 1980. Although the percentage of residents working in San Francisco remains high (86% in 1980), this percentage has been declining. In other words, the rate of growth of employed City residents working in San Francisco is being outpaced by the rate of growth of employed City residents working elsewhere. Reasons for this trend include the large growth of jobs in other counties of the

region and the relocation of some San Francisco jobs to other counties. (San Francisco's share of total regional employment has declined, even though the City's employment has increased substantially.) Another factor is the increase in households with more than one worker, which increases the likelihood that some workers will commute to jobs outside the City.

The trends described above incorporate a combination of many individual changes in employment and place of residence. Changes in the place of residence of San Francisco or C-3 District workers occur as individuals are newly employed in San Francisco or the C-3 District, who had not previously worked there, and as both existing and newly employed workers move within the region.

The changes which result in individuals being newly employed in the City (who had not previously worked there) can affect overall residence patterns if those newly employed have different household and housing characteristics from those whom they replaced or from all other workers in the City. They are likely to have different characteristics if the mix of types of jobs is changing (such as more office jobs relative to other types of employment), if the demographic characteristics of the work force in general are changing (such as changes in age distribution or ethnic/racial characteristics) or if there are changes in the distribution of the labor force within the region (such as more growth of labor force members in the areas surrounding San Francisco than in the City itself or substantially larger growth in San Francisco employment than in employed City residents).

Changes in residence patterns also reflect housing market factors. Housing market factors have been particularly important in the recent past since the housing choices (housing types, prices, rents, locations) available have changed dramatically over the past five to ten years. Housing is now more costly relative to incomes and to other goods and services than it was in the past. Further, a greater share of the region's housing is now located outside of San Francisco, and City housing has become more costly relative to housing in many other parts of the region than it once was. While housing choices change over time, their effect on residence patterns primarily occurs when a household enters the market to purchase or rent housing. Thus, as workers select their place of residence a greater share are likely to live outside of San Francisco and those who choose to reside in

the City may have different characteristics from the average of all other employees who secured housing in San Francisco under a different market situation.

Housing Market Conditions in San Francisco and the Bay Area

Housing Market Context

Since the early 1970s, housing prices and rents have increased dramatically in San Francisco and throughout the Bay Area. Demand for housing has been strong and supply has not kept pace with demand in many areas. In addition, in the early 1980s, major changes in financial markets substantially increased the cost of money for housing. Many different factors contribute to the current housing market situation. These include changing lifestyles, changing demographic and household characteristics, changing household incomes, employment growth, the attractiveness of the Bay Area as a place to live, the availability and cost of financing, the attractiveness of real estate as an investment, no-growth policies in some communities, and the increasing scarcity of land in other communities.

As a result of all of these factors, many households now allocate a greater share of their financial resources to housing, and the housing choices available at various prices and rents have changed. Many people cannot now afford the housing they prefer and many are not housed at the standard that, until recently, they had come to expect.

Changing Conditions in San Francisco's Housing Market

From 1970 to 1980, net additions to the City's housing stock included 6,200 units for an increase of two percent. About 1,900 units were added from 1980 through 1982. Most of the units added were for-sale housing. Overall, about one-third of the City's stock continues to be owner-occupied and about two-thirds renter-occupied. Among Bay Area counties, San Francisco has the largest percentage of renter-occupied units.⁴

This net addition represents low growth of the housing stock relative to the strength of demand over this period. The low vacancy rate in San Francisco highlights the severity of the housing market pressures in San Francisco. Data from the Federal Home Loan Bank show a vacancy rate of 0.8% for San Francisco. San Francisco had the lowest housing vacancy among the nine counties of the Bay Area in 1981.⁵

These market pressures are part of the explanation for the substantial increase in housing prices in the City. Market trend data based on appraisals indicate that housing value increases averaged 8.5% per year in the early 1970s and over 23% per year from 1975 to 1980. From 1980 to 1983, appreciation has slowed to around an annual average of six percent. San Francisco housing prices remain above those for housing in many other parts of the region. The market trend data indicate that the rates of increase in San Francisco have exceeded those in most other areas.⁶

Rents in San Francisco have also increased. Census data indicate that median contract rent more than doubled from 1970 to 1980, for an average annual growth of 7.6%. Rents in San Francisco generally cover a wider range than rents in other parts of the region, including some of the lowest rent housing and some of the most expensive rental units in the region.⁷

Despite rising housing prices and rents, the private market continues to be unable to produce enough new housing to relieve competitive pressures. Because of the high costs of land, financing, and construction, the private market cannot produce housing that is affordable to many households. Producing rental housing has been particularly difficult since residential rents, unlike for-sale housing prices, have not kept pace with rising construction and land costs or with inflation.

Incomes of City residents have not kept pace with increases in the costs of housing. During the 1970s, on average, income increased by about 135% over the period, while housing costs overall (combining median prices and rent) went up about 165%.⁸ Thus, the percentage of income allocated to housing increased.

The percentage of income spent on housing is higher for lower income households. The percentage declines as income increases. Across income categories, the percentage of income spent on housing is higher for renters than for owners. For example, census data show that of the 31% of households with incomes under \$10,000 in 1979, on average, the renters spent 48.6% of their income for housing and the owners spent 26.0% for housing. Of the 39% with 1979 incomes of \$20,000 or higher, the renters spent 15.7% of their income on housing while the owners spent 11.2%.⁹

In the current housing market, incentives to upgrade existing housing continue. Consumers priced out of higher priced neighborhoods are often attracted to areas where housing can be secured initially at lower costs and investments made to upgrade the units. As this occurs, the desirability of the area improves, prices and rents rise, and the types and incomes of the households living in the neighborhood change. Moreover, the housing stock at lower prices and rents is reduced. This phenomenon (often called "gentrification") has occurred in areas of San Francisco. It has occurred primarily in neighborhoods with housing priced at below average levels but which is not the lowest priced housing in the City. In recent years, increasing preferences for central city neighborhoods and older housing and an increase in the types of households with these preferences have combined with overall competitive market conditions to support upgrading of this type.

Regional Perspective on Housing Market Conditions

Most of the housing market conditions described above for San Francisco are applicable throughout the Bay Area. Increases in home prices and in interest rates during the past decade have raised the cost of ownership housing. As a result, many first-time homebuyers and new entrants into the region's housing market now have difficulty affording Bay Area housing. In the rental housing market, a large number of households also face an affordability problem. The lack of new construction and continued strong demand support upward pressure on rents. Among renters, many lower income households are faced with increasing difficulty securing affordable housing.

Although these conditions exist to some extent in other parts of the country, the Bay Area remains one of the most desirable places to live and has one of the most competitive housing markets in the nation. Because of the limited supply of land in San Francisco, the role of the City as the employment center for the region, and the demographic characteristics of the City's population, the region's market conditions, in terms of supply, demand, and price, are at their extreme in San Francisco.

Between 1970 and 1980, 436,200 housing units were added in the Bay Area. Most of the additions were in the East Bay and the Peninsula, each with about 40% of the total

increase. The largest percentage increase in housing over the period occurred in the North Bay counties.¹⁰

The shortage of supply relative to demand is evidenced in the vacancy rates for Bay Area counties. In 1983, the vacancy rate in Bay Area counties was below 2% except in Solano County which had a vacancy rate of 2.1%. With the exception of Solano County (where the 1980 vacancy rate was 3%) this situation has persisted since 1980.¹¹

Market trend data on the value of single family residences in the Bay Area reflect the strong demand for housing in the region. Over the region as a whole, housing values increased almost fourfold between 1973 and 1983; the annual rate of increase in value was about 14% per year, compounded. The pattern is similar among East Bay, Peninsula and North Bay housing submarkets. In San Francisco, the data indicate somewhat stronger demand and more market pressure on existing units than the average for the region.¹²

¹The data and information presented in this sub-section are based on a survey and analyses of C-3 District employment and residence patterns prepared for the Downtown Plan EIR. This information, therefore, does not account for all workers in the greater downtown area; it does, however, describe the majority of the work force in that area. The residence patterns for C-3 District workers in 1984 are presented in the Downtown Plan EIR on pp. IV.D. 36-39 and, in the context of future residence patterns, in Table IV.D.15 on p. IV.D.64. The survey results related to the residence patterns of C-3 District workers are presented in the setting section on Residence Patterns and Housing (Section IV.D) in the Downtown Plan EIR, which is available for review at the Department of City Planning.

²The trends summarized here are discussed in more detail with relevant tables in the Downtown Plan EIR, pp. IV.D.42-53, which are hereby incorporated by reference pursuant to State CEQA Guidelines, Section 15150.

³Population and employment data from the U.S. Census, 1960, 1970 and 1980 for San Francisco and the region are the basis for the following discussion.

⁴U.S. Department of Commerce, 1970 Census of Population and Housing, and 1980 Census of Housing and San Francisco Department of City Planning, Residence Element of the Comprehensive Plan, June, 1984.

⁵ Real Estate Research Council, Year-End 1983 Report - May, 1984, Volume 35/Numbers 2 and 4.

⁶ Real Estate Research Council, Market Trend Report - April, 1983, Volume 35/Number 1.

⁷ U.S. Department of Commerce, 1970 Census of Population and Housing, and 1980 Census of Housing.

⁸ Ibid.

⁹ Ibid.

¹⁰ Ibid.

¹¹ Real Estate Research Council, Year-End 1983 Report - May, 1984, Volume 35/Numbers 2 and 4.

¹² Real Estate Research Council, Market Trend Report - April, 1983, Volume 35/Number 1.

V. ENVIRONMENTAL IMPACTS

A. INTRODUCTION TO CUMULATIVE IMPACT ANALYSIS

Comparison of Two Approaches

Two approaches are used to assess cumulative impacts. The "Downtown Plan EIR forecast" approach presents a cumulative scenario for C-3 District land use change, employment growth, and residence patterns between 1984 and 2000. This approach incorporates the effects of changes in downtown zoning policy on future growth, specifically the effects of the proposed Downtown Plan and Alternatives.

The Downtown Plan EIR forecast approach presents a cumulative scenario for C-3 District land use change and employment growth between 1984 and 2000. This approach provides growth forecasts based on analysis of policies affecting the size, cost, and location of new development, in the context of underlying local and regional economic conditions influencing the demand for space. These forecasts identify the likely rate of absorption of space in projects already approved. They also identify the additional space expected to be built and absorbed by the year 2000 in response to the demand for space to accommodate employment growth and consistent with the ability to add space under future policies. The purpose of the forecast approach was to identify long term growth under proposed policies which would represent a change from current and past policies.

The methodology for the Downtown Plan EIR forecasts is not described in detail in the Supplemental EIRs since it is explained in the Downtown Plan EIR. It is a more complex methodology than the list-based approach since it considers the effects of more factors and considers changes over time in existing conditions in addition to the changes due to growth.

A detailed explanation of the methodology can be found in the Downtown Plan EIR itself with clarification provided particularly in Sections B.1 and B.2 of that EIR's Responses to Comments.

The "list-based" approach uses the March 22, 1985 list of projects in the greater downtown area (including those outside the C-3 district) that are under construction, approved, and under formal review by the Department of City Planning as the basis for estimating future activity. (See Appendix B, pp. A-3 to A-13, for a complete listing of projects on the cumulative list and an explanation of the list.) The space in projects on the list represents foreseeable future development which is added to the base year (1984) level of activity. The growth of downtown employment to be accommodated by the development of these projects is estimated by converting additional space into additional employment using employment density factors currently in evidence in downtown San Francisco as identified in the Downtown Plan EIR Employer Survey (see Appendix E in the Supplemental EIRs).

Under the list-based approach, the future impacts of new downtown construction are estimated on the basis of a list of all specific downtown projects under construction, approved and under formal review. In contrast to the Downtown Plan EIR methodology, the list defines only an amount of development that is likely to occur; it neither defines nor predicts when the impacts of that development will be felt; thus, no specific time frame is attached to the list-based analysis.

The approximate time period within which the projects on the list will be completed, and EIR the additional space they provide absorbed, is relevant for assessing cumulative impacts. Such a time frame helps to identify the future local and regional context within which the impacts of the growth accommodated by the list projects will be felt. Although the list projects may be built by the early 1990s, and some will be built earlier, project construction per se is not the relevant event for assessing future impacts. The transit, housing and other impacts analyzed in this Supplemental EIR will be felt only when the projects on the list are occupied. More precisely, such impacts will be felt when the additional space the projects contribute to the overall downtown market is absorbed by downtown employment growth. References to occupancy of the list projects in this Supplemental EIR are therefore more properly references to overall absorption of the space provided by the projects. Enough employment growth to absorb the additional space represented by the March 22, 1985 list is expected to occur during the 1990s -- probably the mid-1990s.¹ Thus, if one were to put a time frame on the cumulative impacts to occur because of the development of the projects on the list, it would be mid-1990s.

Under the list-based approach, no assumption is made about future development beyond those projects on the list. This is a limitation of the list-based approach to cumulative impact assessment; the analysis can only go as far as the last application for project review. To extend the list beyond applications for review by the City would be speculative. It would be an improper use of the list-type of cumulative analysis to extend a list of relatively "known" projects, through speculation as to the next group of applications likely to be received.

The list-based approach does not incorporate any conclusions about the effects of changes in policies such as the proposed new downtown zoning.

In the subsequent cumulative impact sections, the project's effects are compared to the overall effects within each of these two cumulative contexts. Because of several essential differences between the two approaches, data derived from each approach cannot be directly compared. However, the projected cumulative analyses using each method results in a similar assessment of the impact of cumulative growth in the downtown on San Francisco and the region.

The following chart (Figure 3) highlights the differences between the Downtown Plan EIR forecast approach and the list-based approach. Generally, the basic difference is that the Downtown Plan EIR approach accounts for changes to a range of land uses as well as changes over time in worker characteristics and behavior, while the list-based approach is limited to known projects of certain types and assumes unchanging characteristics and behavior. These two approaches are alternative means of assessing the future cumulative context for downtown development. They use different available data sources and information and different assumptions. The specifics are listed on the chart. Both of these are described as acceptable and the California Environmental Quality Act (CEQA) Guidelines, Section 15130(b).

Figure 3: COMPARISON OF CUMULATIVE IMPACT ASSESSMENT METHODOLOGIES

	<u>Downtown Plan Forecast Approach</u>	<u>List-Based Approach</u>
<u>Focus of Impact Assessment</u>	Impacts of C-3 District land use and employment within context of rest of City and region	Impacts of land use and employment in the greater downtown area (including C-3 District and adjacent areas) within context of rest of City and region
<u>Time Frame</u>	1984 base year Changes in C-3 District land use and employment forecast to occur between 1984 and 2000	1984 base year Changes in greater downtown land use and employment determined by buildout and absorption of March 22, 1985 List of Cumulative Office Development in Downtown San Francisco. (Although no specific date is attached to these changes, they could occur between 1990 and 2000; probably during the mid-1990's).
<u>Land Use</u>	1984 base year includes all land uses Incorporates changes over time in office, retail, hotel, industrial, and all other C-3 District space Reflects changes in response to market demands for space within context of C-3 District planning policies Incorporates new construction, demolitions, and conversions for all land uses Incorporates more intensive use of space (both existing and new) over time. (e.g. employment density for management/technical office is 276 gross sq. ft. of occupied space per employee in 1984 and 267 gross sq. ft. per employee in 2000)	1984 base year includes all land uses Incorporates net additions of office and retail space in greater downtown area as shown on the List Reflects changes as a result of development of projects on the List Incorporates new construction and demolition of office and retail space and conversions to office and retail uses as included on the List Intensity of use of space does not change over time. (e.g., employment density for management/technical office is always 276 gross sq. ft. of occupied space per employee)
<u>Employment</u>	1984 base includes all C-3 District employment Changes over time incorporate increases and decreases in all types of permanent employment directly associated with a land use, in building maintenance/security employment, and in construction employment	1984 base includes all employment in the greater downtown area Changes over time incorporate the growth of office and retail employment as a result of development of the projects on the List
<u>Residence Patterns and Housing</u>	Residence patterns change over time reflecting changing regional labor force, housing market, employment and transportation factors. (e.g., the percentage of C-3 District management/technical office workers living in San Francisco is currently 49% and would decline to 44% in 2000)	No change in residence patterns from current conditions (e.g. the current 49% of C-3 District management/technical office workers living in San Francisco is assumed to continue to apply)
<u>Transportation</u>	Trip generation has been adjusted to account for travel between buildings (such as between office and retail uses) which does not leave the downtown Modal split changes over time reflecting capacity improvements, changing residence patterns, and behavior adaptations Includes growth of local and regional non-C-3 District travel	No adjustment made to trip generation: all trips for building on the List counted as new travel in or out of downtown No changes from current modal splits are assumed Local and regional non-C-3 District travel assumed to remain constant at 1984 levels except for addition of travel due to development of the projects on the List
<u>Key Reference</u>	Downtown Plan EIR, EE31.3, March 16, 1984	Transportation Guidelines for Environmental Impact Review: Transportation Impacts, September, 1983

Comparison of the Project to Cumulative Development in the C-3 District and the Greater Downtown Area

The two approaches to cumulative assessment of transportation, air quality, energy and housing impacts start with estimates of building development. Over the 1984-2000 period, a net addition of 21.7 million sq. ft. of space for all uses is forecast for the C-3 District under the Downtown Plan in the Downtown Plan EIR. This estimate falls near the lower end of the range represented by the five Alternatives to the Plan (between the 21.3 million sq. ft. net addition forecast for Alternative 5 and the 29.9 million sq. ft. net addition forecast for Alternative 2).² As of March 22, 1985, the City's list of cumulative office development included the net addition of 21.8 million sq. ft. of office and retail space in the greater downtown area.

The project (145,200 sq. ft. of net additional office and retail space) can be compared to each of these estimates of cumulative development. The project is in the C-3 District and would be completed during the 1984 to 2000 period. It would represent 0.7% of the total increase in space forecast for this area under the Downtown Plan in the Downtown Plan EIR. The project is on the list of cumulative office development in the greater downtown and would represent about 0.7% of the total net additional office and retail space in projects on the list.

¹The mid-1990s time frame was determined by comparing the amount of employment growth that would be accommodated downtown by the additional space shown on the March 22, 1985 list to forecasts of future employment growth. These forecasts were based on extensive economic analysis of the many factors and trends influencing future economic growth and the demand for additional downtown space. Based on such a comparison, it was concluded that enough employment growth to absorb the additional space provided by the list projects may be expected by the mid-1990s.

²The Alternatives to the Downtown Plan are summarized in the Downtown Plan EIR, EE81.3, certified October 18, 1984, in Section VII., Alternatives. Alternative 1 is the "Planning Code Alternative"; Alternative 2 is the "Chamber of Commerce Alternative"; Alternative 3 is the "Proposition 'O' Alternative"; Alternative 4 is the "San Franciscans for Reasonable Growth Alternative"; and Alternative 5 is the "Department of City Planning Alternative".

B. TRANSPORTATION

TRAVEL DEMAND ANALYSIS

Project Travel Demand

On the basis of land use, the project would generate about 3,689 net new person trip-ends (pte) per day.¹ These figures include trips made by auto, public transit, service vehicles, and other modes (and include trips by visitors and employees). Projected p.m. peak-period and peak-hour trips by mode expected to be generated by the project are shown in Table 1. About 515 new outbound trips would occur during the p.m. peak period from the project, of which about 310 would occur in the p.m. peak hour.²

Assignments to travel modes (including service and delivery vehicles) for the project have been made on the basis of future modal splits from the Downtown Plan EIR (EE81.3) for the year 2000.³ The future modal splits have been applied to the project travel for the purpose of comparing project travel with future travel demand on the transportation system serving San Francisco. The fundamental assumption in the application of a future modal split to project travel is that the project travelers would behave in a fashion similar to the majority of travelers in the downtown. The modal splits used were derived from aggregate data for the C-3 District, the zoning district that contains the project site, and thus represent an average condition. The actual modal split for travel from the project may vary from the C-3 District average. However, because the travel demand forecasts used to derive the average modal split data include the travel from the project, application of the average modal split data to project travel appears to be sufficiently accurate for purposes of comparison.

Cumulative Travel Demand

Analysis of the transportation impacts of cumulative development in San Francisco EIRs has been the subject of considerable public discussion. Until recently, cumulative analysis was conducted solely on the basis of a list of proposed development in the greater downtown area (see Table B-2, Appendix B, for the March 22, 1985 list of these projects). The Downtown Plan EIR method is a refinement of the transportation analysis process that uses projections of employment growth, independent of a list of proposed projects, to project future travel.⁴

TABLE 1
DISTRIBUTION OF NET NEW PROJECT PERSON TRIPS
OUTBOUND DURING PM PEAK PERIOD

Location and Mode	Peak-Period Person Trips (1-hr/2-hr)		
	Work	Non-Work	Total ¹
San Francisco			
Auto	37/59	2/4	39/63
Muni			
NE	6/15	4/8	10/22
NW	22/35	1/1	23/37
SW	20/39	1/2	21/41
SE	4/9	1/2	5/11
BART	6/12	1/2	7/13
Walk	10/20	53/102	63/122
Other	2/4	0/1	2/5
	<u>107/192</u>	<u>63/121</u>	<u>170/313</u>
East Bay			
Auto	20/23	1/2	21/26
BART	38/58	3/6	41/64
AC	13/22	---	13/22
Other	1/1	---	1/1
	<u>72/104</u>	<u>4/8</u>	<u>77/112</u>
Peninsula			
Auto	17/25	0/1	17/26
BART	7/9	1/1	8/10
Samtrans	4/8	---	4/8
SP	6/7	1/2	7/9
Other	1/3	---	1/3
	<u>36/52</u>	<u>2/4</u>	<u>38/56</u>
North Bay			
Auto	8/10	1/2	9/11
GGT Bus	12/18	1/1	12/18
GGT Ferry	2/2	---	2/2
Other	2/2	---	2/2
	<u>24/32</u>	<u>1/3</u>	<u>25/35</u>
Total	<u>239/380</u>	<u>71/136</u>	<u>310/516</u>

Source: EIP Associates; and Department of City Planning, Office of Environmental Review (OER), Final EIR for the Downtown Plan, EE81.3, Certified October 18, 1984, on file at OER, 450 McAllister Street, Fifth Floor, San Francisco, CA.

¹ Numbers may not total exactly due to rounding.

Downtown Plan EIR Methodology

As discussed in Appendix J of the Downtown Plan EIR, transit service improvements have been assumed to be implemented by the year 2000. The service improvements assumed to occur correspond to the vehicle acquisition portions of the 5-year Plans for Muni, AC Transit, SamTrans, CalTrain, and Golden Gate Transit. For BART, both the vehicle acquisition program and the trackage improvements (Daly City tail track) were assumed to occur. These planned improvements would allow system capacities to keep pace with demand increases over time. The Downtown Plan EIR transportation analysis also assumes that regional auto use will continue to change over time in response to increasing levels of congestion on the bridges and freeways serving the City. The analysis projects a shift from single-occupant auto use (drive alone) for commuting to ridesharing (carpool, vanpool), and to transit use. The assumptions of continuing shift from auto to transit and ridesharing, most apparent in the 2000 modal splits, are made on the basis of long-term trends in transit use in the San Francisco commute corridors. Census data show that during the period of 1970 to 1980 transit use for commuting increased. Similarly, Bay Bridge data show that ridesharing has been increasing over the last seven years. Thus, the shift to transit and ridesharing is well-established in San Francisco commute corridors.

The travel data presented in the Downtown Plan EIR transportation sections (and in this report) are projections of total demand on the transportation system serving San Francisco. The projections comprise three components of travel demand. Two of the components were developed through an intricate travel modelling process for the C-3 District of San Francisco. These first two components of travel demand are C-3 District work (employee journey-to-work) travel and C-3 District non-work (all other) travel. The third component is non-C-3 District travel, which was forecast through an analysis of regional trends adjusted for the effect of development in the C-3 District. Non-C-3 travel is defined as travel that has neither an origin nor a destination in the C-3 District. Thus, non-C-3 travel includes travel to and from other parts of downtown and trips through San Francisco and other parts of the region. Employment projections are not specifically used in the non-C-3 travel analysis.

Although the C-3 District transportation modelling process used analytical techniques common to travel forecasting, several portions of the process are unique to the C-3 District. The uniqueness is the result of the development of two major data bases -- an inventory of existing land uses in the district and surveys of employees and employers in the district. The data developed from the surveys and the inventory have been used as the basis for forecasts of development and employment growth in the C-3 District. Sections IV.B, Land Use and Real Estate Development; IV.C, Business and Employment; IV.D., Residence Patterns and Housing; and Appendices G, Land Use and Real Estate Analysis; H, Business and Employment Analysis; and I, Theoretical Discussion of Housing Market Effects/Methodology for Forecasting Residence Patterns, of the Downtown Plan EIR, which contain detailed information about methods used to project future employment in the C-3 District, are incorporated by reference into this report and summarized below and in the Land Use and the Residence Patterns and Housing sections of this Supplemental EIR.

The cumulative analyses for forecasting future land use, employment, and residence patterns are described in the Downtown Plan EIR. Appendix sections therein describe the methodology, identify the factors considered, and identify the types and sources of data used. A concise description of the major components of the process of developing employment and land use development forecasts is presented in the flow charts in Figure H.1 and Figure G.1 of the Downtown Plan EIR. The factors considered in forecasting residence patterns are identified in the diagram in Figure I.1.

The Downtown Plan EIR approach for forecasting future land use, employment, and residence patterns is based on a conceptual framework of the process of urban economic development. The analytical procedures incorporate a variety of types and sources of data and information concerning past, current, and likely future conditions regarding economic, real estate, demographic, and public-policy factors.

●

Through a complex calibration and validation process of comparing projections of travel demand modelled on the basis of the survey of C-3 District employees to actual travel from measurements made by state, city and regional agencies, work and non-work travel demand from the C-3 District was modelled for the years 1984, 1990 and 2000. The modelling process comprises the following steps:

- o Trip generation rates (empirical measures of total travel to and from a specific land use) were applied to employment forecasts by business activity (i.e., different rates were used for various land uses).
- o The total travel from the C-3 District was distributed to seven Bay Area zones on the basis of projections of future employee residence patterns and origin/destination patterns for non-work travel.
- o Trips to each of the seven regional zones were assigned to travel modes on the basis of modal splits (distribution of travel over the transportation modes --auto, transit, etc.) developed from the C-3 District surveys.

At this stage of the process, the model forecasts total travel from the C-3 District. To complete the process and to allow analysis of the effect of travel demand from C-3 District development on the transportation network, the non-C-3 travel demand was analyzed. The total travel demand was calculated by summing C-3 District work and non-work travel and non-C-3 travel at subregional measuring points (called screenlines) located at or just beyond the San Francisco County Line (except for Muni and BART Westbay service which were measured inside San Francisco, outside the downtown). The total travel demand was then compared to available service (capacity) at the screenlines and operating conditions (demand-to-capacity ratios) were analyzed assuming planned improvements. The results of those analyses are summarized later in this section.

As shown in Table 2, travel demand from the Alternatives in the Downtown Plan EIR ranges from Alternative 1 (about 17% higher than the Downtown Plan) to Alternative 4 (about 5% lower than the Plan). Although there is a range, the spread is within the level

● P.M. PEAK-HOUR CUMULATIVE TRAVEL DEMAND FROM C-3 DISTRICT GROWTH (person trip ends)

Mode of Travel	3/22/85	Downtown Plan	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
	List ¹	(1984-2000) ²	(1984-2000) ²	(1984-2000) ²	(1984-2000) ²	(1984-2000) ²	(1984-2000) ²
Work Person Trip-ends	24,200	41,400	47,600	46,200	44,400	39,100	39,700
Other Person Trip-ends	7,000	12,100	14,700	14,200	13,400	11,800	11,800
Total Person Trip-ends	31,200	53,500	62,500	60,500	57,900	51,000	51,600
Muni Northeast	900	1,600	1,700	1,600	1,600	1,700	1,700
Northwest	4,000	1,800	2,000	1,900	1,800	1,800	1,800
Southwest	3,200	1,100	1,100	1,000	900	800	800
Southeast	700	1,100	1,000	1,000	1,000	600	700
BART Eastbay	4,600	11,800	13,300	13,100	12,700	11,300	11,300
Westbay	1,800	2,400	2,800	2,700	2,600	2,300	2,300
AC Transit	2,000	200	600	500	300	-100	-100
GGT Bus	1,100	3,200	3,700	3,600	3,500	2,700	3,100
Ferry	300	800	800	800	800	800	800
SamTrans	300	1,200	1,300	1,300	1,200	1,000	1,100
SPRR/CalTrain	500	1,800	2,000	1,900	1,800	1,700	1,700
Regional Auto ³							
Golden Gate Bridge	380	410	630	590	540	390	370
Bay Bridge	1,030	1,250	1,550	1,540	1,510	1,060	1,110
Bayshore Freeway (U.S. 101)	480	470	650	620	590	400	400
Interstate 280	480	470	650	620	590	400	400

¹Travel from only those projects on the list that are located inside the C-3 District. The list also contains development located in the greater downtown area outside the C-3 District; travel from those projects has been included in the list-based travel shown in the remainder of this section.

● ²Inbound and outbound travel from the C-3 District only. The analysis used in the Downtown Plan Draft EIR assumes growth in regional travel that is not shown above; it is discussed in the remainder of this section.

³Vehicle trip-ends; calculation made on the basis of 3 persons per carpool and 5 persons per vanpool. Person trip-ends on transit cannot be added to vehicle trip-ends to obtain total person trip-ends because of the varying numbers of persons per vehicle.

Source: Environmental Science Associates, Inc. and EIP Associates

of accuracy of the transportation analysis, and thus, statistically, the transportation impacts of the Alternatives are equivalent to those of the Downtown Plan.

For future years, the C-3 travel modelling process was modified to incorporate changes in travel patterns (modal split changes, different travel times), employee residence patterns and changes in land use patterns. The process incorporates the dynamic aspects of changing Bay Area travel patterns, rather than assuming a fixed, unchanging condition over time. An example of past changes in travel patterns can be seen in the amount of carpooling activity on the Bay Bridge. In 1977, peak average vehicle occupancy westbound on the Bridge was 1.7 persons per vehicle. By 1983, in response to increasing congestion and increased travel and parking costs, peak average vehicle occupancy westbound increased to 2.1 persons per vehicle.⁵

The non-C-3 travel demand at the sub-regional screenlines was forecast through the use of growth factors developed on the basis of historic trends in regional and subregional travel.⁶ Non-C-3 travel is defined as travel that has neither an origin nor a destination in the C-3 District. Thus, non-C-3 travel includes travel to and from other parts of downtown and trips through San Francisco from other parts of the region.

The growth rate applied to identifiable non-C-3 travel components was based on the total growth over the 5-year period from 1977 to 1982 at the particular screenline in question. That overall growth rate was used only on measured non-C-3 travel to arrive at future non-C-3 travel volumes, while future C-3 travel was based on employment forecasts for the C-3 District in the future. Because the non-C-3 growth rate was based on total travel at screenlines, use of that rate to describe future non-C-3 travel assumes that non-C-3 travel would in the future grow at the same rate as C-3 plus non-C-3 grew in the past. When one considers that these growth rates include the effects of the increase in C-3 District employment between 1977 and 1982, it is apparent that the rates conservatively overestimate the potential for growth of the non-C-3 components of travel at the screenlines.

Historic growth rates (factors) have been used to project increases only for non-C-3 District travel at the regional screenlines. No other use of historic growth rates has been

made in the transportation analysis. The screenlines are points of maximum effect of travel from the C-3 District; at points further removed from the screenlines, C-3 District travel would be a lesser percentage of the total and thus the overall effects of C-3 District travel would be less than at the screenlines. Because of the individual and unique nature of each of the transportation screenlines, each growth rate is based on data for that location. Thus, the growth rates for freeways project growth in auto trips, while the growth rates for transit project growth in ridership.

The portion of travel labeled "C-3 travel" in many cases also includes some non-C-3 travelers. As explained in Appendix J to the Downtown Plan EIR, in some cases it was not possible to separate C-3 and non-C-3 travelers reflected in the totals. (See pages J.20-25.) When this was the case, since the EIR covers various alternative growth controls for the C-3 District, C-3 travel was emphasized in order to show C-3 District impacts in the most conservative light. For example, although BART ridership includes a non-C-3 component, the C-3 component includes all riders who enter the system at the Market Street stations. Obviously, some travelers using one of the four Market Street stations actually work south of Folsom or in Chinatown or on Van Ness Avenue. Because these travelers are included in the C-3 numbers, the non-C-3 is under-reported but the total of C-3 and non-C-3 remains accurate (see Appendix J, page J.23). Golden Gate Transit and SamTrans illustrate this point even more strongly; survey data showed that C-3 use of these systems essentially equals total ridership, leaving no non-C-3 component. Although in reality there clearly are workers from outside C-3 who commute on these transit systems, the Downtown Plan EIR analyses called everyone C-3 because there was no statistical basis on which to separate the totals into two components and because the focus of the EIR was C-3 District impacts.

Each of the historic growth rates inherently contains information about regional growth in travel patterns and thus incorporates not only growth from other parts of San Francisco, but from elsewhere in the region. As an example, the historic growth factor for trips southbound on US 101 includes travel that crosses the Bay Bridge or the Golden Gate Bridge as well as travel from San Francisco. However, the growth is projected as growth in auto travel and cannot be related directly to growth in employment in San Francisco.

With these facts in mind, it becomes clear that while total travel on the various transportation systems is accurately projected by the computer model, the portion of the total that represents non-C-3 travelers can not be identified in such a way as to permit comparison with any estimates of numbers of workers expected to have jobs in the non-C-3 portions of the greater downtown.

List-Based Analysis

The other process used to forecast cumulative transportation impacts starts with a list of cumulative office and retail development (net new office and retail space) proposed, approved or under construction in the greater downtown area. From that list, through the use of static employment densities for office and retail uses and established trip generation rates, forecasts of travel demand are made. The forecast travel is assigned to modes on the basis of modal split factors which are assumed not to change over time. The Transportation Guidelines for Environmental Impact Review: Transportation Impacts (Department of City Planning, September 1983, hereinafter Transportation Guidelines) describe the process and the data used to calculate transportation impacts from the list-based development.

The current list, shown in Table B-2, has about 20.4 million gross sq. ft. of net new office space and about 1.4 million gross sq. ft. of net new retail space. On the basis of the Transportation Guidelines analysis, the list-based development would generate approximately 103,000 p.m. peak-period person trip-ends of which about 60,000 would occur in the p.m. peak hour. Table 2 shows a comparison of the projections of travel demand from the list-based analysis and from the Downtown Plan EIR for the year 2000. While the list contains development both inside and outside the C-3 District, the Downtown Plan EIR makes specific projections only for C-3 District development, and the travel components shown in Table 2 are for the C-3 District only; therefore, for purposes of comparison, travel from the C-3 component of the list (about 14.4 million gross sq. ft. of net new office space and 0.7 million gross sq. ft. of retail space) has been analyzed for comparison with the projections from the Downtown Plan EIR for Alternatives 1 to 5 and the Downtown Plan. The impact analysis (see pages 36-40) has considered the total amount of development (both C-3 and non C-3) on the Cumulative List.

Comparison of Methodologies

Several anomalies are apparent in the data shown in Table 2. The major anomaly is that, while the C-3 component of the list would generate about one-half as much travel as do the Downtown Plan and the five Alternatives, the list-based analysis projected travel demands within San Francisco (inside and outside the C-3 District) that exceed those generated by the Downtown Plan and the Alternatives. An explanation of this major anomaly is presented in the following paragraphs.

The difference in total travel results, in part, from the different time frames of the list and the Downtown Plan EIR. The Downtown Plan EIR established 1984 as the baseline year and 1990 and 2000 as target study years. Estimates of growth were made on the basis of projections for each of the target years for the range of alternatives. In contrast, the projects included on the Cumulative List span a period from 1984 to sometime in the mid-1990s when completion and occupancy of all projects on the list or a similar amount of square footage would be expected.⁷ This is one of the major reasons why results of impact analyses using these two forecasting methods are not directly comparable.

The variations in travel by trip purpose (work, other) and by travel mode (as shown in Table 2) between the list-based method and the Downtown Plan EIR method can be explained by differences in the methodologies and data bases used to forecast the travel demand. The list-based analysis employs single-use trip generation data to estimate total travel through the process of adding the trip generation estimates from all the individual buildings on the list. These single-use trip generation rates do not incorporate any discounting factors to account for trips going from one building to another within the downtown. Studies for the Downtown Plan EIR have confirmed that there is considerable travel between land uses in the downtown area. Thus, the list-based analysis adds each trip as if it were a new trip in or out of downtown and overestimates the total number of peak-hour trips.

The Downtown Plan EIR travel demand model has refined the trip generation process by incorporating discounting factors that adjust the trip generation rates to give travel to and from the C-3 District as a whole; it does not include trips internal to the C-3 District.

Although the Downtown Plan EIR process projects proportionately more work travel than does the list-based analysis, observations show that the Downtown Plan EIR forecasts more closely resemble actual travel demand that would result from downtown development.

The differences in distribution of travel among modes (shown in Table 2) are the product of refinements in the regional distribution and modal split analyses in the Downtown Plan EIR process. The list-based analysis assumes a static (unchanging over time) regional distribution and static modal splits. The Downtown Plan EIR analysis has incorporated changes in both the regional trip distribution (reflecting projected availability of housing) and modal splits (reflecting projected availability of roadway and transit capacity in the future).

The list-based analysis yields more San Francisco travel (as shown by larger Muni numbers for the list-based analysis in Table 2) than does the Downtown Plan EIR analysis, because the Downtown Plan EIR analysis projects a declining availability of housing in the City. The distribution of downtown workers by county of residence throughout the region (the residence patterns for downtown workers) was an input to the transportation analysis using both the list-based approach and the Downtown Plan EIR approach. Under the list-based approach where residence patterns are derived directly from the results of the 1982 C 3 District Employee Survey, the percentage of the downtown workforce residing in San Francisco is assumed to remain constant over time. Implicitly, this assumes that, in the future, employment, housing, and the employed population in San Francisco relative to the rest of the region continue to reflect the current pattern. On the other hand, the Downtown Plan EIR forecast approach accounts for changes over time in the relative availability of housing and labor force throughout the region.

Under the Downtown Plan EIR forecasts, the percentage of downtown workers residing in San Francisco declines over time. The basic assumption is that employment growth in San Francisco will exceed the growth of the City's employed population and that the growth of the City's employed population will not be proportional to the growth of the labor force residing elsewhere in the region. In other words, in the future, the relative importance to downtown jobs of the region's labor force residing outside of San Francisco will increase.

This is consistent with long-term trends. In the list-based approach, the inherent assumption is that the relative availability of housing throughout the City in the future would reflect current patterns. The residence patterns of downtown workers living in San Francisco using this approach were derived directly from the results of the 1982 C-3 District Employee Survey. On the other hand, the Downtown Plan EIR forecast approach included assumptions about how the relative availability of housing in different City locations would change over time. The residence patterns forecasts for C-3 District workers in the year 2000 which are used in the transportation analysis reflect an assumption is that there would be relatively more housing in the eastern parts of the City (near the downtown) in the future as compared to the current overall distribution. The City's Residence Element identifies opportunities for adding substantial numbers of units in mixed-use projects and redevelopment areas in this part of the City. (See Downtown Plan EIR, page IV.D.60 and note 42.)

Other differences in travel among the modes, particularly regional auto and AC Transit, are the result of the refined modal split process used in the Downtown Plan EIR. As the list-based analysis assumes that modal split remains constant over time, the list-based analysis is insensitive to the abilities of transit agencies and regional roadway systems to serve future demand. The Downtown Plan EIR analysis has assumed that the modal split would change over time in response to the increasing levels of congestion at the regional screenlines (described in the Downtown Plan EIR). Thus, because the Bay Bridge is at or near capacity in the p.m. peak-hour eastbound, the Downtown Plan EIR modal split projects a proportionately lower increase in auto demand to the East Bay than does the list-based analysis. Similarly, for AC Transit the Downtown Plan EIR recognizes that current regional transit policy dictates no increases in AC Transit transbay service and thus, the ability of AC Transit to carry additional riders transbay will be restricted in the future. Use of this changing modal split is a refinement that allows the travel mode to more accurately forecast travel demand and thus, the Downtown Plan EIR results represent a more accurate level of projection than has been possible using methods and data available to date.

Various other factors cause differences in the travel demand projections between the two approaches. The Downtown Plan EIR and the Consultant's Report on Downtown Growth

Management Alternatives (Environmental Science Associates, 1983) contain extensive discussion of the analyses and data used to forecast employment, land use (see sections cited above) and transportation demand (see Section IV.E and Appendix J of those reports).

TRANSIT

The transit agencies serving downtown San Francisco carry approximately 60% of the peak-period employee work travel, as well as about 20% of the peak-period other travel. P.m. peak-hour and peak-period loadings on the local and regional transit routes were found to be near capacity for some of the routes in 1984 (see Table 3). The values shown in Table 3 are sums over the peak-hour and the two-hour peak period. Within the peak hour there would be periods of time when the loading ratios would be higher than those shown for the hour (peak-of-the-peak conditions). Individual transit vehicle loadings vary on a day-to-day basis because of fluctuations in ridership (demand) and because of variations in operating conditions caused by traffic congestion, equipment availability, and/or system breakdowns. Photographic examples of p.m. peak-hour loadings on Muni vehicles are shown in Appendix C, Figure C-1.

Downtown Plan EIR Methodology

The 1981/82 transit ridership and loading data used in the Downtown Plan EIR analysis are summations of actual counts of individual transit lines for that period of time. Calculations are made on the basis of observed operating conditions, as opposed to scheduled operations. Muni supplied the data for the Downtown Plan EIR analysis from its ongoing program of ridership checks. (The data supplied and collected for each transit agency are in the supporting documentation for the Downtown Plan EIR, on file with the Office of Environmental Review, 450 McAllister St., San Francisco, CA.) Muni was involved in the process of verifying the transportation analysis for the Downtown Plan EIR and as a result of that process, approved of the use of Muni data and the projections derived from that data.

The level of service concept, similar to that developed for highway operations, has been applied to both bus and rail transit. Passengers per seat (i.e., total passengers divided by the number of seats) has been used as the measure of effectiveness to define the various

TABLE 3: OUTBOUND REGIONAL TRANSIT DEMAND AND LEVEL OF SERVICE

Transit Agency	1984			1984+CUMULATIVE LIST (Using 1990 Capacity)						2000			1984 + CUMULATIVE LIST (Using 2000 Capacity)					
	(Downtown Plan EIR)			1990			(Using 1990 Capacity)			(Downtown Plan EIR)			2000			(Using 2000 Capacity)		
	Riders	P/S ¹	LOS ²	Demand	P/S	LOS	Demand	P/S	LOS	Demand	P/S	LOS	Demand	P/S	LOS	Rounded Demand	P/S	LOS
P.M. Peak Hour	Muni																	
	Northeast	7,100	1.16	D	7,900	1.13	D	8,600	1.23	D	8,800	1.05	D	8,600	1.03	D	0.6	0.6
	Northwest	8,200	1.26	E	9,200	1.26	E	13,500	1.85	F	10,100	1.25	D	13,500	1.67	F	1.2	0.9
	Southwest	13,500	1.45	E	15,100	1.44	E	17,900	1.71	F	16,600	1.42	E	17,900	1.53	F	0.6	0.6
	Southeast	5,300	1.06	D	6,200	1.03	D	6,500	1.08	D	7,400	1.01	D	6,500	0.89	C	0.3	0.4
BART	Transbay	16,100	1.53	F	20,500	1.42	E	22,200	1.54	F	27,900	1.42	E	22,200	1.13	D	0.8	0.9
	Westbay	7,700	1.10	D	8,800	1.26	D	10,100	1.45	E	10,100	1.06	D	10,100	1.06	D	0.8	0.8
	AC Transit	9,100	0.94	C	10,500	1.08	D	11,800	1.21	D	10,500	1.08	D	11,800	1.21	D	0.7	0.6
	GGT Bus	5,300	1.00	C	6,600	0.86	C	6,800	0.89	C	8,500	0.91	C	6,800	0.73	B	0.7	0.9
P.M. Peak Period	GGT Ferry	800	0.57	B	1,100	0.28	A	1,200	0.31	A	1,500	0.38	A	1,200	0.30	A	0.7	0.9
	Tiburon Ferry	200	0.40	A	200	0.40	A	200	0.40	A	300	0.60	B	200	0.40	A	--	--
	SamTrans	1,900	1.12	D	2,400	1.20	D	2,400	1.20	D	3,100	1.19	D	2,400	0.92	C	0.7	0.9
	CalTrain	3,100	0.61	B	4,000	0.65	B	3,800	0.62	B	4,900	0.79	C	3,800	0.61	B	0.8	1.0
Muni	Northeast	12,600	1.06	D	13,900	1.01	D	15,300	1.11	D	15,500	0.95	C	15,300	0.94	C	0.7	0.7
	Northwest	13,100	1.13	D	14,100	1.07	D	21,400	1.62	F	15,300	1.05	D	21,400	1.47	E	1.2	0.9
	Southwest	23,300	1.31	E	26,000	1.29	E	30,300	1.50	F	28,700	1.29	E	30,300	1.36	E	0.7	0.7
	Southeast	9,100	1.00	C	10,300	0.95	C	11,100	1.02	D	12,100	0.88	C	11,100	0.81	C	0.4	0.5
BART	Eastbay	25,800	1.54	F	32,600	1.42	E	35,400	1.54	F	44,100	1.40	E	35,400	1.12	D	0.7	1.0
	Westbay	11,300	0.80	C	12,800	0.91	C	15,000	1.07	D	14,600	0.77	C	15,000	0.79	C	0.8	0.8
	AC Transit	14,000	0.95	C	17,000	1.16	D	18,200	1.24	D	17,000	1.16	D	18,200	1.24	D	0.7	0.6
	GGT Bus	7,600	0.90	C	9,500	0.77	C	10,000	0.81	C	12,200	0.81	C	10,000	0.66	B	0.8	0.9
P.M. Peak Period	GGT Ferry	1,000	0.56	B	1,400	0.27	A	1,700	0.33	A	1,700	0.33	A	1,700	0.33	A	0.8	0.8
	Tiburon Ferry	300	0.60	B	400	0.80	C	400	0.90	C	500	1.00	C	400	0.80	C	--	--
	SamTrans	2,900	1.12	D	3,400	1.13	D	3,600	1.20	D	4,500	1.15	D	3,600	0.92	C	0.9	1.1
	CalTrain (SPRR)	4,500	0.68	B	5,200	0.64	B	5,600	0.69	B	6,200	0.77	C	5,600	0.70	B	0.7	0.8

¹ Passengers per seat is the ratio of total demand to seated capacity.² Level of service is scale ranging from A to F that relates P/S ratios to passenger loading conditions on transit vehicles (see Table C-1, Appendix C).³ The percent of demand generated by the project.

Source: Environmental Science Associates, Inc. and EIP Associates

level of service ranges. Table C-1, Appendix C, shows the relationship between level of service and passengers-per-seat (P/S) ratios for bus transit systems.

During the p.m. peak hour in 1984, all of the transit agencies were found to be operating in Level of Service D or better, with the exception of BART Transbay, where conditions were found to be at Level of Service F, and Muni in the northwest and southwest corridors, where operations were found to be in Level of Service E. Although BART is a rail transit service, its cars have a unique seating configuration. The ratio of total capacity to seated capacity for a BART car (about 1.5) is equivalent to the ratio for bus transit, thus the bus transit level of service scale is applicable to BART. Level of Service F ("crush" or "jammed" loadings) on BART is in the range of 1.5 to 1.8 passengers per seat. Because BART operates on a centrally controlled system, the "crush" loadings would not increase passenger loading times (which causes deterioration of service) as would be the case on a bus transit system; rather, the effects of "crush" loadings on BART would be reflected in increased passenger discomfort.

The rail transit level of service scale is based on typical light rail transit systems for which total capacity is about 2.0 to 2.2 times seated capacity. The rail transit level of service scale would be applicable to Muni Metro, which provides about 50% of the seated capacity to the southwest corridor. Because Metro vehicles can accommodate higher loadings (a ratio of 2.0 passengers per seat) than buses or trolleys (a 1.5 ratio), the level of service would be somewhat better than shown in Table 3. An exact estimate of Metro loadings is not possible without analysis of the Metro service separate from the remainder of Muni service to the southwest; such analysis would be beyond the ability of the travel demand analysis to predict accurately over time, as discussed in the following paragraphs.

With regard to the Muni data presented in Table 3, the Muni routes have been aggregated on a corridor basis and thus include two-directional travel on some routes that serve the northeast and southeast corridors. The EIR uses the corridor-based analysis because it is not possible to predict accurately which individual transit lines future riders would use, only which corridor they would use. Additionally, it can be assumed that if a rider desired to take one line that was operating at or above capacity, he/she might switch to another line, within the same corridor, that was operating below capacity. Therefore, the

corridor-based analysis gives a more accurate prediction of overall Muni operations than would a line-by-line analysis. As described on page IV.E.9 of the Downtown Plan EIR, aggregation of line-by-line data may slightly distort overall ridership conditions. The Muni numbers cannot be added over the corridors to get a total for the system.

Neither can capacity be shifted from one corridor to another. For instance, capacity in the northeast corridor depends, in large part, on capacity that serves the southeast portion of the City. The 15, 19, 30, 30X, 30AX, 30BX, 32, 41, 42, and 47 lines pass through the downtown in two directions. Service on the above lines is interdependent. Thus, increases or decreases in capacity on one of the above lines directly affect service in the opposite direction. Service to the northeast and northwest corridors is also interconnected, as lines serving the northwest must pass through the northeast corridor, and thus serve both areas. Muni ridership and capacity have been apportioned between both areas.

Passengers-per-seat ratios are only one measure of adequacy of service. The constraints of operating on heavily used streets in and around the downtown cause transit-vehicle bunching, loss of running time and missed schedules, all of which reduce service, reliability, and ultimately, capacity. In some respects, this would not be evident from simple quantitative analysis. In addition to these inefficiencies inherent within the transportation system, there are other factors which would affect overall transit capacities. These include variability in daily and seasonal ridership for which an absolute capacity must be available, as well as transit riders who remain uncounted because their transit trips both start and end beyond the screenlines used in this analysis. Daily fluctuations in fleet availability also affect system capacity.

Further, policy considerations dictate minimum operating conditions on certain lines; minimum headways that have been established to maintain transit access to areas served by those lines are not warranted on the basis of ridership alone. When averaged together, the ridership data from these lines may slightly distort overall ridership conditions.

P.m. peak-period conditions on transit in 1984 were found to be equivalent to or better than peak-hour conditions. In some cases, where demand remains at peak-hour levels

during the two-hour period, the passengers-per-seat ratios in the two-hour period are higher than in the one-hour period. This anomaly is the result of transit agencies' providing express (or additional) service during the peak hour, but not during the entire peak period. An example of this type of operation may be seen on BART, where three extra trains operate in transbay service in the peak hour but not in the peak period. Another factor involved is the distribution of demand (ridership) at uniformly high levels over the peak period.

Both transit demand and capacity have been assumed to increase during the period 1984 to 2000. The discussions of transit capacity increases for the agencies are based on the Five-Year Plans and Capital Improvement Plans of the various transit agencies; they appear in Appendix J of the Downtown Plan EIR, pp. J.25-J.26. This material, which is discussed below and summarized in Table 3, is incorporated by reference.⁸ The future capacities were developed by applying percentage increases, expected in the future, to observed existing capacity. Thus, to the extent that the existing conditions contain inherent capacity reduction for missed runs, the future capacity projections have taken into account the inability of the transit systems to provide 100% of scheduled capacity. As noted above, the Muni analysis calculates capacity on the basis of all runs leaving the C 3 District in the p.m. peak. For all of the transit analyses, only peak-direction vehicles are counted.

Future transit demand and loadings under the Downtown Plan EIR in the year 2000 and for 1984-plus-the-Cumulative-List condition are shown in Table 3 for both the peak hour and the peak period. The total transit demand from the project would represent about 0.1% of the total travel demand on the transit carriers in the year 2000.

Peak-hour transit demand on Muni in the year 2000 would increase about 25% over 1984 levels in the northeast, northwest and southwest corridors. Muni demand in the southeast corridor would increase about 40% between 1984 and 2000. Peak-hour demand on the other agencies would increase between 30% and 70% during the period 1984 to 2000.

Peak-period increases in demand would be between 15% and 70% from 1984 to 2000. Overall peak-period transit travel would be expected to increase about 30% between 1984

and 2000. Peak-hour and peak-period passenger loadings would be worse than in 1984, although most systems would operate in acceptable conditions (Level of Service D or better). However, BART Eastbay and Muni to the southwest would be in Level of Service E during the peak hour and the peak period.

Although the data in Table 3 are calculated on the basis of projections for the Downtown Plan, similar conditions would be expected under the five Alternatives in the Downtown Plan EIR. As shown in Table 2, total transit demand under Alternative 1 would be about 12% higher than under the Downtown Plan, while transit demand from Alternative 4 would be about 9% lower than the Plan. As noted previously, these differences would not be statistically significant. In terms of Level of Service, the Downtown Plan would be equivalent to the five Alternatives.

It is important to note that the Five-Year Plan improvements for the transit systems are designed both to provide for future demand increases and to improve service levels from existing conditions. For new vehicles to expand system capacity rather than represent replacement on a one-to-one basis, operating revenues would similarly need to be increased. During the year 2000 peak hour, Muni service to the southwest would exceed the desirable passengers per seat ratio of 1.25.⁹ Although the transit demand in the corridor in excess of the desirable loading would be able to be accommodated under crowded conditions and thus would not be excess demand (that is, not beyond capacity), demand in excess of the desirable loading would mean that additional transit service (beyond that assumed to occur by 2000) would need to be provided to allow transit operations in the corridor to meet the goals set by Muni. To meet the goal of 1.25 passengers per seat in the peak hour, Muni would have to increase service by about 14% in the southwest corridor over the amount of service assumed to occur in 2000.

If transit service were not increased beyond the amounts assumed to occur by the year 2000 in the Downtown Plan EIR, transit operations (in terms of passenger comfort) would be slightly better than 1984 conditions. Peak-hour and peak-period passengers-per-seat ratios would be lower than 1984 ratios even though service (in some corridors) has been assumed to increase as much as 80% between 1984 and 2000.

If the Downtown Plan's goals regarding increased transit use were achieved and the proposals in the Plan regarding transit service improvements were to be fully developed and in place, the impacts on transit agencies would be less than described above. If the goals were achieved, transit agencies would experience greater levels of demand than under this analysis but overall passenger loadings would be lower (and within desirable levels) because of increased transit service availability that would come about if the proposals stated in the Plan were developed. Section VI., Mitigation, contains measures that would provide the additional transit service required to mitigate the above impacts.

List-Based Analysis

Also shown in Table 3 is an independent analysis of the conditions that would result from adding the travel from the Cumulative List to the 1984 base data, as is specified in the Transportation Guidelines. The transit demand expected from the projects on the list has been compared both to projected 1990 capacity conditions and to year 2000 capacity conditions. The primary reason for providing both sets of analyses is that there are no available projections of transit system capacities for the mid-1990s, when buildout and absorption of the list projects are expected. Thus, the data in the "Cumulative List + 1984" columns are intended to describe the foreseeable range of transit impacts under the list-based analysis.

Data derived from year 2000 capacity figures are considered to be a more realistic representation of future impacts than those derived from 1990 capacity figures for several reasons. First, the capacity projections for the year 2000 are conservative ones; transit agency plans for capacity increases that were determined to be somewhat more speculative were not included in assumed capacities. Second, as explained above, the list-based method utilizes single-use trip generation rates, thereby adding each trip as if it were a new trip in or out of the downtown. Consequently, the total number of peak-hour trips are overestimated under this method. Thus, while the column which presents the impacts of the list-based transit demand in relation to year 2000 capacity projections may slightly understate actual impacts, that assessment is considered to be more accurate than the impact assessment using 1990 capacity projections due to the fact that capacity projections are conservative and demand projections are overstated.

- Assuming year 2000 capacities, only two Muni corridors would not meet "acceptable" loadings. This is also true assuming 1990 capacities, with the exception that BART transbay would slightly exceed BART's "acceptable" loadings of 1.5 passengers per seat.

The project travel would represent about 0.2% of the total travel on transit in the 1984-plus-the-Cumulative-List condition.¹⁰ As noted above, the list-based analysis overestimates the component of travel from San Francisco, as is shown in Table 3 by higher P/S ratios for Muni in the northwest and southwest corridors and lower P/S ratios for BART Transbay, SamTrans, and CalTrain than under the Downtown Plan EIR method. Under the 1984-plus-the-Cumulative-List conditions, Muni would not meet its service goals in the northwest and southwest corridors; this would require additional service increases of 27% and 20%, respectively, to meet Muni's goal of 1.25 passengers-per-seat in the peak hour. The other transit agencies would meet their service goals under these conditions.

PEDESTRIAN MOVEMENTS

The primary pedestrian entrance to the project is on Market Street; it provides access to the building lobby and elevators that service the upper-floor offices. Ground floor retail space is accessed from the building lobby. A second pedestrian entrance is provided to Stevenson Street. The project at full occupancy would generate about 130 pedestrian trips during the peak noon hour and about 100 pedestrian trips during the p.m. peak hour.

Operating conditions on sidewalks and crosswalks have been categorized into a Pedestrian Flow Regimen, which relates density of pedestrians in a specific time period (pedestrians per foot of clear sidewalk width per minute) to quality of pedestrian flow (the difficulty of maintaining walking paths and speeds on a sidewalk).¹¹ Table C-2, Appendix C of this report, shows the relationships among flow rates, walking speed, path choice, and interactions between pedestrians for each flow regime. Figure C-2, Appendix C of this report, shows photographs of sidewalk conditions for each flow regime. Typically, an upper limit for desirable conditions is 14 pedestrians per foot per minute (p/f/m), defined as crowded; conditions as high as 18 p/f/m, a congested condition, are possible, with some conflicts among pedestrians.¹¹

Table 4 compares existing pedestrian flows with predicted pedestrian volumes on Market Street in the year 2000. The Market Street sidewalk currently operates in unimpeded conditions during the noon peak hour and in open conditions during the p.m.-peak hour.

In the year 2000 pedestrian conditions would remain unimpeded during the noon peak and would shift from open to unimpeded during the p.m. peak-hour. The project-generated pedestrian traffic would represent an increase in sidewalk traffic of about 32% during the noon peak and 40% during the p.m. peak.

Although the data in Table 4 are calculated on the basis of projections for the Downtown Plan, similar conditions would be expected under the five Alternatives in the Downtown Plan EIR. Pedestrian travel demand, although not shown in Table 2, is closely related to total travel demand because the majority of trips on the primary modes shown in Table 2 begin or end as pedestrian trips at a building. Total travel demand for Alternative 1 would be about 17% higher than that under the Downtown Plan, while that under Alternative 4 would be about 5% lower than that under the Plan. The range among the Alternatives would not change the flow regimen shown in Table 4.

Also shown in Table 4 are the results of adding travel from the Cumulative List to the 1984 base data. Under the list-based analysis, conditions on Market Street would remain in the unimpeded range during the noon peak hour and shift from open to unimpeded during the p.m. peak-hour. The project would represent about a 30% of the increase in the noon sidewalk traffic and a 39% increase in the p.m. peak-hour traffic. These results are similar to those using the Downtown Plan methodology.

TABLE 4: PEAK PEDESTRIAN VOLUMES AND FLOW REGIMEN

	<u>Existing¹</u>		<u>2000</u>		<u>1984 + CUMULATIVE LIST</u>	
	<u>p/f/m²</u>	<u>Flow³ Regimen³</u>	<u>p/f/m</u>	<u>Flow Regimen</u>	<u>Project Percent of Increase</u>	<u>Project Percent of Increase</u>
<u>NOON PEAK³</u>						
Market Street Sidewalk	0.7	Unimpeded	1.3	Unimpeded	1.36	Unimpeded 30
<u>P.M. PEAK</u>						
Market Street Sidewalk	0.38	Open	0.8	Unimpeded	.83	Unimpeded 39

¹ Counts conducted by EIP Associates April 1, 1985.

² Pedestrians per foot of effective sidewalk width per minute.

³ See Table C-2 and Figure C-2 (Appendix C) for descriptions of pedestrian flow regimen.

⁴ Year 2000 impacts are calculated according to Downtown Plan EIR methodology.

Source: EIP Associates.

TRAFFIC

The analysis of traffic impacts has been conducted on two levels; one level of analysis considered impacts at the regional screenlines, the second level of analysis considered impacts at intersections in and near the downtown.

Regional Freeway Analysis

Analysis of traffic conditions at the regional screenlines has been conducted for both the p.m. peak hour and the two-hour p.m. peak period. A.m. peak traffic conditions at the regional screenlines have the effect of regulating the amount of traffic that reaches the downtown from outside of the City. This analysis has therefore considered p.m. peak conditions. P.m. conditions are usually most severe on both freeways and streets within San Francisco, whereas a.m. peak-conditions are most severe at locations outside of the City.

Traffic demands at the regional screenlines in 1984 (see Table 5) during the p.m. peak-hour were found to use between 90% and 100% of the available capacity on the freeways and bridges. Although the eastbound capacity of the Bay Bridge is calculated to be 9,000 vehicles per hour (vph), the 1984 peak-hour volume shown in Table 5 represents the effective eastbound capacity. The volume figures shown in Table 5 for 1984 for the one-hour and two-hour periods are averages of several days; thus, values for individual days may be different from the average.

Peak-hour freeway operating conditions in 1984 were found to be generally in Level of Service D to E conditions, which would indicate unstable flows in the 35 mph to 45 mph range. Table C-4, Appendix C, shows the Level of Service for freeway operations. Peak-of-the-peak conditions within the peak hour were found to be worse than the hourly conditions because of surges in traffic demand during the peak hour. Conditions during the peak-period at the screenlines were found to be similar to those experienced during the peak-hour.

As shown in Table 5, demand during the peak hour in the East Bay and Peninsula corridors would be expected to increase about 15% between 1984 and 2000. Peak-hour demand in

TABLE 5: OUTBOUND REGIONAL AUTO DEMAND

<u>Regional Auto Corridor</u> <u>P.M. Peak Hour</u>	<u>Capacity</u> ¹	<u>1984</u>		<u>2000</u>		<u>1984 + CUMULATIVE LIST</u>	
		<u>Volume</u> ²	<u>Demand</u>	<u>Demand</u>	<u>Project Percent</u>	<u>Demand</u>	<u>Project Percent</u>
Bay Bridge (I-80)	9,000	8,540	9,790	0.1		10,400	0.1
Golden Gate Bridge (US-101)	7,200	6,740	7,150	0.1		7,600	0.1
US-101 (south of Harney Way)	8,000	7,390	8,400	0.1		8,300	0.1
I-280 (between Alemany Blvd. and San Jose Avenue)	8,000	7,610	8,650	0.1		8,500	0.1
<u>P.M. Peak Period</u>							
Bay Bridge (I-80)	18,000	17,880	19,330	0.1		20,900	0.1
Golden Gate Bridge (US-101)	14,400	13,870	14,850	0.1		15,400	0.1
US-101 (south of Harney Way)	16,000	14,200	16,530	-- ³		15,700	0.1
I-280 (between Alemany Blvd. and San Jose Avenue)	16,000	13,620	15,890	--		15,100	0.1

¹ Although the capacity of the Bay Bridge is calculated to be 9,000 vehicles per hour (vph), the 1984 peak-hour demand shown above represents the effective capacity.

² The volumes for 1984 for the one-hour and two-hour periods are averages of several days and, thus, values for individual days may be different than the average.

³ -- represents less than .05%. Project percents are rounded to the nearest one-tenth of one percent.

Source: EIP Associates.

the North Bay corridor would increase by about six percent between 1984 and 2000. The project travel demand, about 25 p.m. peak-hour and 36 p.m. peak-period outbound vehicle trip-ends, would represent about 0.1% or less of the total demand in each corridor in the year 2000. Both the East Bay and Peninsula corridors would have excess peak-hour demand that would not be met during the peak period.¹² The North Bay corridor would have excess demand in the peak period. Excess auto demand would result in either a spreading of the demand into the hours adjacent to the peak period or in increased transit and ridesharing use should additional transit service (beyond that assumed to occur by the year 2000) or ridesharing incentives be provided.

Operating conditions at the regional screenlines would be at or near capacity in Level of Service E. Traffic flow conditions would be expected to be very unstable and could experience temporary flow interruptions throughout the peak-period. Peak-of-the-peak conditions would be prevalent during the peak hour and might extend into the peak period. The overall two-hour commute period would not be expected to increase substantially in the future. Rather, the occurrence of peak-of-the-peak conditions, now less than one hour, would most likely expand to fill the one-hour peak.

As shown in Table 5, the list-based cumulative analysis, while not comparable to the year 2000 data, produces similar estimates of future demand. The results reflect the tendency of the list-based method to overestimate regional auto travel. The project would represent less than 0.1% of the regional auto demand in this condition. The Bay Bridge and I-280 would have excess demand during the peak hour; the Bay Bridge, the Golden Gate Bridge, and I-280 would have excess demand during the peak period. The same conclusions noted above regarding future operating conditions would apply to this condition as well.

Intersection Analysis

The streets that serve the project as feeders to or from freeway ramps are points of maximum automobile traffic congestion in the Financial and Downtown Districts. Conditions on these streets were assumed to represent the "worst case" or greatest traffic impacts of the project.

Impacts from the project on other streets would be less, because project traffic on them would be more dispersed. Routes of drivers going to garages were assumed to be sufficiently dispersed so that they would have no measurable effect on traffic volumes on the streets adjacent to the project. Project impacts at the intersections closest to the project site would result primarily from service-vehicle and pedestrian traffic. The traffic volumes from the project would not be detectable against the background of future traffic growth from development in the downtown at the intersections adjacent to the project.

Traffic operations at intersections near freeway ramps serving the project site vicinity have been analyzed for traffic impacts. The levels of service for Sixth/Brannan, Fifth/Bryant, and Eighth/Bryant are shown in Table 6. The existing level of service for Sixth/Brannan is F, and for Fifth/Bryant and Eighth/Bryant E-F. The volume to capacity ratio for Sixth/Brannan is 1.18. Volume to capacity ratios for Fifth/Bryant and Eighth/Bryant are 0.53 and 0.45 respectively. In general, traffic flows smoothly through the latter two intersections and they would be considered at service level A. But due to backups on the freeway, the on-ramps become congested and traffic backs into the intersection inhibiting turning movements onto the ramp. Therefore the level of service is considered to be E-F. Level of Service descriptions are shown in Table C-3, Appendix C.

TABLE 6: PROJECTED P.M. PEAK-HOUR INTERSECTION VOLUME-TO-CAPACITY RATIOS (V/C) AND LEVELS OF SERVICE (LOS)¹

Intersection	Existing		2000		1984 + CUMULATIVE LIST	
	V/C	LOS	V/C	LOS	V/C	LOS
Sixth & Brannan ²	1.18	F	1.41	F	1.32	F
Fifth & Bryant ³	.53	E-F	.63	E-F	.59	E-F
Eighth & Bryant ³	.45	E-F	.54	E-F	.54	E-F

¹ Level of Service descriptions and relationship to V/C ratios are shown in Table C-3, Appendix C of this report.

² Downtown Plan EIR certified October 18, 1984.

³ Counts by EIP Associates March 7, 1985.

Source: EIP Associates.

Peak-hour conditions would be expected to deteriorate at all of the intersections by the year 2000. Expanded areas of traffic congestion would disrupt surface Muni operations. If the mitigation measures for transportation are implemented, the intersection operating conditions would be improved.

As shown in Table 6, the list-based analysis yields similar Level of Service intersection conditions compared to those for the year 2000. While similar to the results of the Downtown Plan EIR, the list-based results are not directly comparable for the reasons stated above.

Although the traffic data shown in Table 5 and used to calculate the v/c ratios in Table 6 are calculated on the basis of projections for the Downtown Plan, similar traffic data would be expected under the five Alternatives in the Downtown Plan EIR. As shown in Table 2, regional traffic demand under Alternative 1 would be about 34% higher than under the Downtown Plan while regional traffic demand from Alternative 4 would be about 13% lower than under the Plan. In terms of Level of Service, the Alternatives would be equivalent to the Downtown Plan.

PARKING

The estimated parking demand (both long-term and short-term) from the C-3 District in 1984 was found to be about 45,300 spaces, which would occupy about 94% of the 48,000 parking spaces in and near the C-3 District.¹³ The short-term parking demand, while representing about 25% of the equivalent daily demand, is about 65% of the daily vehicle travel. Although the equivalent daily demand would leave about 10% of the parking supply vacant, surges in short-term demand (more travel in one period than in another period) can cause temporary localized overloads of parking facilities within various portions of the downtown, even though parking may be available elsewhere in the downtown.

The project does not provide any on-site parking. At full occupancy, the project would create a long-term parking demand of 72 spaces and short-term demand of 18 spaces, for a total demand of about 90 equivalent daily spaces. Therefore, there would be an on-site deficit of 90 spaces.¹⁴ Parking demand generated by the project would be added to the facilities in the surrounding area.

The Downtown Plan EIR estimates that the C-3 District would generate demand for approximately 58,000 equivalent daily parking spaces in the year 2000 under the Downtown Plan, an increase of 28% from 1984. Short-term demand would continue to represent about 25% of the total demand. The project parking demand would represent less than 0.2% of the total demand from the C-3 District. The parking supply has been assumed to be about 51,000 spaces. There would be a parking deficit of about 7,000 spaces in the year 2000 if vehicular demand occurs as projected. However, as shown in Table 5, the analysis for the year 2000 forecasts excess auto demand in the peak hour and the peak period. If the excess demand is accommodated on transit or ridesharing, then the overall parking demand would decrease from the above estimate by about 2,300 spaces. If the Goals of the Downtown Plan are met, total parking demand in the year 2000 would be about 48,100 equivalent daily spaces, an increase of six percent over 1984. If the Goals were achieved, there would not be a parking deficit.

The list-based analysis shows future demand for 9,280 spaces from projects in the C-3 District, which, when added to the 1984 data, would be a total demand of 54,600 spaces. The project parking demand would represent about 0.2% of the total demand. While similar to the 58,000 space (unmitigated) demand for the year 2000, the list-based demand is not comparable for the reasons stated above, in particular because the list-based analysis assumes a static modal split and thus overestimates future auto demand.

¹ San Francisco Department of City Planning, Transportation Guidelines for Environmental Impact Review: Transportation Impacts, September 1983. This document describes the procedure used to calculate travel demand from the project. Trip generation rates of 18.1 person trip-ends (pte) per 1,000 gross sq. ft. (gsf) of office space and 150 pte per 1,000 gsf of retail space were used to estimate travel from the project. The trip generation rates are for independent land uses. When used to estimate travel from more than one land use on the same site the rates may overestimate total travel to the site since a portion of the travel from each of the land uses may occur between land uses on the site and not leave the site. Such trips are referred to as "linked trips". On the basis of the data contained in the March 22, 1985 Cumulative List, the trip generation calculation for the project is as follows: $137,500 \text{ gsf office} \times 0.0181 \text{ pte/gsf} + 8,000 \text{ gsf retail} \times 0.15 \text{ pte/gsf} = 3,689 \text{ pte per day}$. The September 1983 Transportation Guidelines are on file and available for public review at the Office of Environmental Review, 450 McAllister Street, San Francisco, CA.

- ² The percentage of travel occurring in the peak period and the peak hour are from the Transportation Guidelines (see Note ¹). Total travel during each of the periods has been adjusted to show only outbound (leaving the downtown area) travel. The outbound travel consists of all of the work-related travel and half of the other (non-work) travel from the project.
- ³ San Francisco Department of City Planning, Office of Environmental Review, Environmental Impact Report for The Downtown Plan, EE81.3, certified October 18, 1984. This document is an analysis of projected growth in the C-3 District to the year 2000 under the Downtown Plan and five alternatives. The transportation analysis in the Downtown Plan EIR includes projections of future modal splits for work and other (non-work) travel for the p.m. peak period, p.m. peak hour, and daily time periods. That document is on file with and available for public review at the Department of City Planning, 450 McAllister Street, San Francisco, CA.
- ⁴ The Downtown Plan EIR contains about 50 pages of text devoted to the description of transportation impacts in the greater downtown area, as well as an additional 30 pages of text describing transportation mitigation measures. The information in this Supplemental EIR is not intended to be a comprehensive summary of the transportation analysis in the Downtown Plan EIR, but rather summarizes portions relevant to the project and its contribution to cumulative impacts. For details and assumptions used to arrive at the data and results presented in the Downtown Plan EIR, see Section IV.E, Transportation Setting and Impact, Section V.E, Transportation Mitigation, and Appendix J, Transportation and Circulation Analyses and Methodologies, of the Downtown Plan EIR, which are incorporated by reference into this report and summarized in the text as appropriate.
- ⁵ Data are from Traffic Survey Service A-48 and MA-60, Spring 1977 and Spring 1983, Metropolitan Transportation Commission.
- ⁶ The analysis of historic trends in travel patterns is from the following sources: Metropolitan Transportation Commission, Travel Observations of the Bay Bridge Corridor, October 21, 1981. Homburger and Dock, Trends in Traffic Patterns at the Bay Bridge and Caldecott Tunnel, U.S. Department of Transportation, DOT-BIP-WP-32-3-77, July 1977; telephone survey of 500 drivers conducted in April 1980 by Golden Gate Transit, data supplied by Alan Zahradnik, Transportation Planner, on February 16, 1983; Office of the Auditor-Controller, Comparative Record of Traffic for the Month of November, May 27, 1937 through November 30, 1982, Golden Gate Bridge, Highway and Transportation District; San Francisco Municipal Railway Planning Division, Projections of Future Muni Demand and Vehicle Requirements, October 1982; San Mateo County Transit District, SamTrans Five-Year Transportation Development Plan 1983-1988, April 1983; California Department of Transportation, CalTrain Caltrans/Southern Pacific Peninsula Train Service Five-Year Plan 1983-1988, July 1983; and traffic volume counts from San Francisco Department of Public Works, Bureau of Engineering, Division of Traffic Engineering and from 1983 San Francisco Cordon Count, JHK and Associates, July 1983.

⁷ See Downtown Plan EIR, pp. II.9-II.11, for a comparison of the cumulative list projections with those of the Downtown Plan EIR.

⁸ Projections of transit capacity improvements were developed for the years 1990 and 2000. These projections were used for purposes of assessing the impacts of the additional demand for transit service projected to occur in the years 1990 and 2000, under the Downtown Plan EIR methodology, and by the mid-1990s, using the List-based methodology.

⁹ San Francisco Municipal Railway, Short-Range Transit Plan 1983-1988, July 1983. Bay Area Rapid Transit District, Short Range Transit Plan for the Five-Year Period July 1983 Through June 1988, August 1983.

¹⁰ The project's percent of total travel on transit under the list-based approach was calculated assuming the distribution of net new project person trips outbound during the p.m. peak period as set forth in Table 1. Assignment to travel modes for the project in that table were made on the basis of modal splits assumed in the Downtown Plan EIR for the year 2000. As explained in the text, the list-based approach of analyzing cumulative impacts assumes a different modal split than that assumed for the Downtown Plan EIR. The result of cumulative transit demand is slightly higher and the percentage of traffic demand slightly lower, than would have been the case had the Downtown Plan EIR assumptions regarding modal split not been used to determine distribution of new person trips.

¹¹ Pushkarev and Zupan, Urban Space for Pedestrians, MIT Press, 1985, p. 85-117.

¹² Table IV.E.4, p. IV.E.36, of the Downtown Plan EIR contains a discussion of the implications of excess demand at the regional screenlines.

¹³ The parking survey data and other supporting calculations and data used in the Downtown Plan EIR transportation impact analysis are on file and available for public review at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, San Francisco, CA.

¹⁴ $1040 \text{ daily work trips} \times 22\% \text{ auto} / 1.6 \text{ persons per auto} / 2 \text{ one-way trips per auto} = 72 \text{ long-term parking spaces.}$

$2640 \text{ daily non-work trips} \times 10\% \text{ auto} / 1.3 \text{ persons per auto} / 2 \text{ one-way trips per auto} / 5.5 \text{ turnovers daily} = 18 \text{ short-term parking spaces.}$

Total project demand = 90.

● C. AIR QUALITY

Projected daily emissions of pollutants from project-generated traffic, and from cumulative development traffic (based on the March 22, 1985 list of Cumulative Office Development in Downtown San Francisco), are shown in Table 7, page 72. Table 7 also shows projected daily emissions in 1990 and 2000 for C-3 District development projected by the Downtown Plan EIR (EE81.3, certified October 18, 1984), and total emissions projected for the entire Bay Area by the 1982 Bay Area Air Quality Plan. The project would contribute about 0.7% to the total air pollutant emissions generated by cumulative list projects and two percent to the total emissions generated by downtown development in 1990, as projected by the Downtown Plan EIR.

Alternative 1 to the Downtown Plan (covered in the Downtown Plan EIR) would generate about 38% more emissions in 2000 (from development between 1990 and 2000) than would the Downtown Plan. Alternative 4 would generate about seven percent less emissions than would the Downtown Plan. Emissions generated by Alternatives 2, 3 and 5 would fall within this range. The types of air quality impacts under these alternatives would be the same as those under the Downtown Plan; their magnitude would vary in proportion to the differences in their emissions.¹

Nitrogen oxides (NOx) and hydrocarbons (HC) are both chemical precursors of ozone. Motor vehicles emit more NOx than HC, and the emissions from building natural gas combustion would consist primarily of NOx. As demonstrated by the LIRAQ (Livermore Regional Air Quality model) regional ozone computer simulations performed for the 1982 Bay Area Air Quality Plan, an increase in the future NOx emissions compared to HC emissions would lead to a decrease in ozone compared to present levels. This model has also shown that Bay Area ozone concentrations are expected to be within the federal standard in 1987, and thereafter. As the future NOx emissions from cumulative development in San Francisco would exceed future HC emissions, this development would not lead to an increase in total Bay Area ozone concentrations. This relationship between NOx and HC emissions would hold both under the cumulative list scenario and the Downtown Plan scenario shown.

TABLE 7
PROJECTED DAILY POLLUTANT EMISSIONS

Emissions (tons per day) ¹						
Pollutant	Project 1990 ²	Cumulative List 1990 ³	Downtown Plan ⁴		Bay Area ⁵	
			1990	2000	1990	2000
Hydrocarbons	0.01	1.5	0.6	0.6	428	428
Nitrogen Oxides	0.01	1.9	0.8	0.8	558	610
Carbon Monoxide	0.07	18.3	6.8	6.6	1,952	1,883
Particulates	0.01	2.9	1.1	1.3	562	649
Sulfur Oxides	0.001	0.22	0.1	0.1	194	233

¹Project, Cumulative List, and Downtown Plan emissions calculated using BAAQMD, EMFAC6C vehicular emission factors. Emissions of HC, NOx, and CO include an assumed six minutes of idling time per vehicle trip. Emissions of TSP include dust disturbed from roadway surfaces.

²Based upon a weighted daily average of 4,000 miles traveled.

³Incremental emissions of downtown-area development are based on list of projected Cumulative Office Development in Downtown San Francisco as of March 22, 1985, (see Appendix B, Table B-2 pp. A-8 - A-11). By the year 2000 a larger portion of the motor vehicle pool will meet federal and state emission standards. Therefore, air quality impacts were analyzed under the list-based method for the year 1990, as opposed to the year 2000, in order to provide the most conservative assessment even though the impacts would not be fully realized until the mid-1990s.

⁴Incremental emissions of C-3 District development, per the Downtown Plan EIR, Table IV.1.2, p. IV.1.12.

⁵Cumulative total emissions of Bay Area development, per ABAG, BAAQMD, MTC, 1982 Bay Area Air Quality Plan, pp. 42, 53, and 112.

SOURCE: EIP Associates and Downtown Plan EIR

At the same time, total emissions of both NO_x and HC are expected to decrease in San Francisco. Total NO_x emissions would decrease in San Francisco by about two percent from 1984 to 2000, but would increase in the Bay Area by about five percent from 1984 to 2000. It is possible that excess NO_x emissions generated by cumulative development (including the project) could increase ozone and/or nitrogenous oxidant concentrations further downwind, outside the Bay Area. In addition, NO_x emissions generated by cumulative development (including the project) throughout the Bay Area could increase acid rain further downwind, outside the Bay Area, though to a relatively small extent due to the magnitude of the increase and to dilution over time and distance.

In 1990 and 2000 (according to the Downtown Plan EIR), area-wide traffic volumes in the downtown area would increase by about 8% and 15%, respectively, over 1984 volumes; average traffic speeds would decrease by about one mph and two mph, respectively, from 1984 speeds. However, in 1990 and 2000 the average vehicle is expected to emit 32% and 43% less carbon monoxide (CO) respectively, than in 1984 due to ongoing state and federal emissions controls.

CO concentrations at 11 representative intersections in the downtown study area, as analyzed in the Downtown Plan EIR, would decrease from 1984 to 1990 and, thereafter, to 2000. CO concentrations at 10 of the 11 intersections would be within the state and federal standards in 1990 and 2000 under the Downtown Plan and the Alternatives. CO concentrations at one intersection (Brannan and Sixth Streets) would continue to exceed the state and federal eight-hour standards both in 1990 and 2000 under the Downtown Plan and the Alternatives. This suggests that additional intersections not selected for analysis in the Downtown Plan EIR might also exceed air quality standards.

The California State Legislature has mandated a biennial Inspection and Maintenance (I/M) program which applies to most cars and light trucks in California. This program went into operation in March 1984. Vehicles covered by the legislation must undergo a check consisting of a visual inspection of the vehicle's emission control system, measurement of tailpipe emissions while the vehicle is idling and comparison of the measured emissions rates to the allowable limits for the appropriate year of manufacture and model of vehicle. Vehicles must have the required emission control equipment and must meet

the specified standards for hydrocarbons and carbon monoxide. If required emissions control equipment is not present it must be installed. If all required equipment is in place but the vehicle's emissions exceed the standards, the owner is required to pay a maximum of \$50 for service intended to result in compliance.

An annual I/M program was evaluated in the 1982 Bay Area Air Quality Plan based on the 1979 source inventory. Based on predicted reduction in hydrocarbons and CO of 25% in covered vehicles, a reduction in total motor-vehicle generated CO of about 18% would be expected. The reduction in total regional CO emissions would be about 16%. The reduction in motor-vehicle generated hydrocarbons would be about 17%; the reduction in total regional hydrocarbon emissions would be about 6%. To account for these reductions, revised emissions factors have been used in the revised Modified Linear Rollback (MLR) model for this project.

Curbside CO concentrations at selected intersections that would be affected by project-generated traffic and by cumulative development traffic (based both on the March 22, 1985 cumulative list and on the Downtown Plan EIR growth projections) were projected for worst-case conditions, and are compared with ambient standards in Table 8, page 75. Although the emission factors differ from those used in the Downtown Plan EIR analysis in that these revised emission factors take the I/M program into account, these projections were calculated using a revised version of the MLR method which was developed for the Downtown Plan EIR.

The results indicate that the state and federal eight-hour CO standards would not be violated under 1990 or 2000 conditions under either the cumulative list or Downtown Plan scenarios at all three intersections studied. By not quantifying predicted reductions from the I/M program, CO emissions were overpredicted for the Downtown Plan EIR.

Emissions of total suspended particulates (TSP) resulting from construction and from vehicle trips generated by the project and cumulative development would increase TSP concentrations, which could increase the frequency of TSP standard violations in San Francisco, with concomitant health effects and reduced visibility.²

TABLE 8
EXISTING AND PROJECTED CURBSIDE CARBON MONOXIDE
CONCENTRATIONS AT SELECTED INTERSECTIONS

Intersection	Averaging Time	Concentrations (ppm) ¹			
		1984	Cumulative List 1990 ²	Downtown Plan ³	
6th/Brannan	1-hour	18.1	11.2	11.2	9.8
	8-hour	<u>13.4</u>	8.0	8.0	7.1
5th/Bryant ⁴	1-hour	16.2	10.4	10.4	9.3
	8-hour	<u>12.5</u>	8.0	7.9	7.0
8th/Bryant ⁴	1-hour	17.0	10.8	10.8	9.5
	8-hour	<u>13.4</u>	8.5	8.5	7.4

¹ Calculations for all scenarios were made using a revised version of the Modified Linear Rollback (MLR) method described in the Downtown Plan EIR. Background concentrations were calculated to be 7.4 ppm for one hour and 5.7 ppm for eight hours in 1984, 6.0 ppm for one hour and 4.5 ppm for eight hours in 1990, and 5.7 ppm for one hour and 4.1 ppm for eight hours in 2000. Underlined values are in excess of the state or federal CO standards. The one-hour state standard is 20 ppm, the one-hour federal standard is 35 ppm, and the eight-hour state and federal standards are 9 ppm. Emission rates were derived from the California Air Resources Board's EMFAC 6D computer model, as published in the BAAQMD's Guidelines, November 1985. These emissions take into account the reduction in CO as a result of the ongoing Statewide Inspection/Maintenance Program.

² Based on the list of projected Cumulative Office Development in Downtown San Francisco as of March 22, 1985 (see Appendix B, Table B-2, p. A-36). By the year 2000 a larger portion of the motor vehicle pool will meet federal and state emission standards. Therefore, air quality impacts were analyzed under the list-based method for the year 1990, as opposed to the year 2000, in order to provide the most conservative assessment even though the impacts would not be fully realized until the mid-1990s.

³ Based on the growth forecast methodology contained in the Downtown Plan EIR.

⁴ Includes effect of adjacent elevated freeway.

SOURCE: EIP Associates and Downtown Plan EIR

Emissions of sulfur oxides (SOx) generated by the project and by cumulative development would not bring San Francisco's sulfur dioxide (SO₂) concentrations measurably closer to violating the standard.

The 1982 Bay Area Air Quality Plan contains strategies which consist primarily of HC and CO emission controls on stationary sources and motor vehicles, and transportation improvements, and are aimed at attaining the federal ozone and CO standards. As discussed above, emissions associated with the project and with cumulative downtown development from the cumulative list or under the Downtown Plan are not projected by this EIR or the Downtown Plan EIR to increase ozone concentrations, and thus would not conflict with the objectives of the 1982 Bay Area Air Quality Plan regarding ozone. Cumulative downtown development had been projected by the Downtown Plan EIR potentially to result in a violation of the eight-hour CO standard at the Brannan/Sixth intersection analyzed therein. By using revised emission factors which account for the I/M program in the revised version of MLR contained in the Downtown Plan EIR, the City no longer predicts violations of CO standards at the Sixth and Brannan intersection or other intersections which have been modeled in the greater downtown. Based on the above, cumulative greater downtown development would not conflict with objectives of the 1982 Bay Area Air Quality Plan regarding CO.

The pollutant emissions and CO concentrations shown in Tables 7 and 8 were projected for 1990 on the basis of two different sets of future growth assumptions, with differing results. In one case, a list of specific projects proposed, approved, and under construction was used (see Appendix B, Table B-2, pp. A-8 through A-11). In the other case the employment growth trend approach of the Downtown Plan EIR was used, and those projections presented. In both cases, the method for air quality analysis was identical. However, the results using projected cumulative development are not directly comparable with those from the Downtown Plan EIR for several reasons.

First, it is reasonable to assume that the projected cumulative development on the list would be completed and the space it provides absorbed sometime between 1990 and 2000, (probably in the mid-1990s), rather than in either of those two analysis years which were used in the Downtown Plan EIR. The pollutant emissions and CO concentrations were

calculated for 1990 using the cumulative list, even though those projects are not expected to be completed until the mid-1990s, in order to provide a comparison with the Downtown Plan EIR results. However, this has the effect of artificially increasing the cumulative list results, because average-vehicle emission rates will decline with time, as a result of state and federal controls.

Second, the transportation analysis used for the Downtown Plan EIR differs from that used for the cumulative list, as described in the Transportation section of this report. Briefly, these differences include the fact that a cumulative list-based analysis assumes the same proportion of new employees would commute by private auto as is currently the case. In contrast, the Downtown Plan EIR analysis projects a shift of commuters from driving alone to carpool and transit, because commute routes such as the Bay Bridge are already at or near capacity and could not accommodate all of the vehicles that would be used if the proportion of persons driving alone to work remained constant.

Other reasons for the differences include the use in the cumulative list analysis of a constant regional distribution of trips, whereas the Downtown Plan EIR forecasts a declining percentage of new employees residing in San Francisco, and the lack in the cumulative list approach of discounting factors to account for trips between individual projects within the Downtown. Also the cumulative list applies to the entire downtown area, a larger geographical area than that analyzed in the Downtown Plan EIR, which contains specific forecasts for the C-3 District but also includes consideration of cumulative impacts of development outside the C-3 District.

Thus, total (regional) vehicle miles traveled and the resulting pollutant emissions projected using the cumulative list approach are considered artificially high. On a local intersection basis, traffic volumes and the resulting CO concentrations might or might not be higher with the cumulative list approach, depending on the particular location. This is because the cumulative list method does not distribute traffic on all the same streets in the same proportions as does the Downtown Plan EIR method.

¹Impacts anticipated from cumulative downtown development have been analyzed in the Downtown Plan Environmental Impact Report (EIR), (EE81.3, certified October 18,

1984). The air quality setting, impacts and alternatives discussion in the Downtown Plan EIR (Vol. 1, pp. IV.I.1-19 and VII.I.1-8; Vol. 2, pp. O.1-9; Vol. 3, part 1, pp. C&R-I, 1-11) is summarized in the text of this EIR and incorporated by reference herein.

² State particulate standards were adopted in 1983 to concentrate on fine particulate matter which has been demonstrated to have health implications when inhaled. Until the State adopts a method for monitoring fine particulate matter, it is not possible to determine what proportion of TSP in San Francisco would be subject to review against the new standards, whether new standards would be violated, or what the health implications would be.

D. ENERGY

Pacific Gas and Electric Company supplies energy to San Francisco customers. Electrical energy is generated from various sources of energy including oil, gas, hydroelectric, geothermal, nuclear, wind, cogeneration and solid waste.¹ In future years PG&E expects to generate electricity from these sources and from coal. The proportion of energy generated from oil and gas is expected to decrease by 1990 with corresponding increases in the proportion of energy generated from other sources listed above.²

New buildings in San Francisco are required to conform to energy conservation standards specified by Title 24 of the California Administrative Code. The State allows developers to comply with the standards through the component performance standards method which requires the incorporation into a building of a set of specific design features, through the use of nondepletable energy resources, or by demonstrating that the building would consume no more than a specified quantity of energy, expressed as Btu's per square foot per year (energy budget).³ Documentation showing compliance with these standards is submitted with the application for the building permit and is enforced by the Bureau of Building Inspection.

Estimated total annual project consumption of electricity would be 2.4 million kWh (24.6 Btu) and estimated total annual natural gas consumption for the project would be 18,900 therms (1.9 billion Btu).

Based on the March 22, 1985 list of cumulative office development in downtown San Francisco, yearly estimated electrical consumption for the projected 21.8 million sq. ft. of additional space in the downtown area would be approximately 370 million kWh of power per year (see Appendix B, Table B-2, pp A-8 to A-11 for a list of these projects).⁴ Electrical demand from the project would be 0.1% of the demand from cumulative list development.

Projections of electrical use for growth that would occur under the Downtown Plan as analyzed in the Downtown Plan EIR, indicate an increase of about 210 million kWh of electricity per-year between 1984 and 1990 as a result of all new development occurring in the C-3 district.^{4,5} From the period 1990 to 2000, electrical consumption rates would

increase by about 330 to 350 million kWh per year, or about 120 to 140 million kWh per year more than between 1984 and 1990.^{5,6} Electric requirements for development that would occur with the alternatives analyzed in the Downtown Plan EIR would increase between 300 through 500 million kWh per year between 1984 and 2000.⁷ Electrical demand from the project would be 1.1% of the demand from Downtown Plan development.

Estimated gas consumption from the 21.8 million square feet of additional space in downtown projected on the basis of the March 22, 1985 list of cumulative office development would be approximately 271 million cubic feet (2.98 million therms) per year. Based on growth estimates contained in the Downtown Plan EIR, between 1984 and 2000 gas consumption will grow by 470 million cu. ft. (about five million therms) per year, of which 210 cu. ft. (about two million therms) per year, would be for office uses.^{4,5} Natural gas requirements for development that would occur with the alternatives analyzed in the Downtown Plan EIR would increase between 580 and 810 million cu. ft. (about six to nine million therms) per year between 1984 and 2000.⁷ Project demand for natural gas would be 0.1% of the demand for cumulative list development and 0.04% of the demand from Downtown Plan development.

For two reasons, referenced estimates in the Downtown Plan EIR are not directly comparable to those made by applying energy consumption factors to the floor area of projected cumulative development (list method). First, the list-based forecasts estimate energy demand at the time of full buildout and absorption of list projects (mid-1990s) rather than during the 1984-1990 and 1990-2000 time periods as in the Downtown Plan EIR. Second, only about 70% of the projects on the March 22, 1985 list of projected cumulative office development in downtown San Francisco fall within the C-3 District boundary, which means the list method estimates energy consumption for a larger area than the Downtown Plan EIR.

PG&E, in examining its ten-year load growth projections for San Francisco, believes that growth rates of net new office space in the downtown will diminish from the historic figure of 1.5 million sq. ft. per year to between 1 million and 1.2 million sq. ft. per year.⁸ According to PG&E, total increased energy demand over the next decade would be approximately 200 million kWh of electricity per year. The PG&E total projection cannot

be compared to the projections in the Downtown Plan EIR because they cover different time periods.⁹

A comparison of the Downtown Plan EIR and PG&E estimates of electricity use between 1990 and 2000 in downtown San Francisco is being prepared by PG&E, to be released in a report later this year. PG&E plans to meet increased San Francisco energy demands to the year 2000 are on pages IV.G.13-14 of the Downtown Plan EIR, which are hereby incorporated by reference. In summary, that material indicates the demand increases in electricity would be met from nuclear sources, oil and gas facilities, hydroelectric and geothermal facilities, and other sources such as cogeneration, wind and imports. PG&E plans to continue receiving most of its natural gas from Canada and Texas under long-term contracts.

¹ PG&E Annual Report, San Francisco, CA 1982.

² PG&E Annual Report, San Francisco, CA 1981.

³ State of California Energy Resources Conservation and Development Commission, Conservation Division, Energy Conservation Design Manual for New Nonresidential Buildings, 1984.

⁴ Energy consumption factors of 18 kWh sq. ft./year and 11 cu. ft./year (about 12,100 Btu) are based on unpublished data of actual building consumption rates supplied by David Rubin, Department of City Planning, personal communication, April 1984, and include base power consumption of the building core (uses covered by Title 24) and power demands of electric office machines (uses not covered by Title 24).

⁵ Downtown Plan EIR, pages IV.G.1-IV.G.17.

⁶ The Downtown Plan EIR uses a consumption rate factor of 18 kWh/sq. ft./year from 1984-1990 and 16 kWh/sq. ft./year from 1990-2000. These different factors are due to Title 24 revisions to reduce building energy budget. These new standards would be reflected by lower electrical consumption in buildings occupied after 1990.

⁷ Downtown Plan EIR, pages VII.G.1-VII.G.4.

⁸ Ken Austin, Commercial-Industrial Marketing Supervisor, Pacific Gas and Electric Company, letter of March 23, 1984. This letter is available for public review at the Office of Environmental Review, Department of City Planning, 450 McAllister Street, San Francisco, CA.

⁹ PG&E's analysis of a typical office building yielded on annual consumption of about 17 kWh per sq. ft. per year which agrees with the City's estimate within the limits of estimation methodology.

E. RESIDENCE PATTERNS AND HOUSING

Future Residence Patterns for San Francisco

Employment growth and building development in downtown San Francisco will result in more employees working and living in the City. Over time, more existing residents will take San Francisco jobs and others who take San Francisco jobs will move into the City.

The future residence patterns described below are quantified and provide the basis for the qualitative conclusions about the housing market implications of downtown growth described in the following subsection. Because the residence patterns can be quantified for both cumulative development and for the increment of growth represented by the project, this allows an estimate of the project's contribution to the impacts of cumulative growth.

Downtown Plan Forecast As Cumulative Context

Forecasts of residence patterns in the year 2000 were prepared for the Downtown Plan EIR.¹ These forecasts incorporate future housing, labor force, and employment patterns in San Francisco and throughout the region and consider changing demographic, housing market, and transportation factors.

Growth expected throughout the region was included in the Downtown Plan EIR analysis of the housing impacts of C-3 District growth. The approach was to use ABAG's regional employment forecasts to describe the growth that is expected to occur by the year 2000. These forecasts incorporate the plans and projects that are expected to be completed by 2000 as well as land use policies from all Bay Area communities. They also include future employment in projects as yet not conceived or proposed. Further, they account for the net result of decreases in employment as firms go out of business or cut back on operations and increases in employment accommodated by new development. They also account for changes in the use of existing space.²

This approach provides a cumulative employment context that is consistent with forecasts of expected future housing and labor force throughout the region. To assess housing impacts, it is important that expected growth of employment be analyzed within the

context of expected growth of the housing supply and of the region's workforce for consistent time periods. Deriving growth from a list of projects would not assure that the time frame for the commercial and industrial projects would be consistent with that for the residential projects or with the time frame of available forecasts of housing and employed population.

According to the Downtown Plan EIR forecasts, approximately 189,000 C-3 District workers would be living in San Francisco in 2000. This represents an increase of 30,000 residents employed in the C-3 District over the 159,000 estimated for 1984, a 19% increase.³ Relatively more employed San Franciscans would be employed in the C-3 District; the percentage of all employed San Franciscans who hold C-3 District jobs would increase from 45% in 1984 to 47.5% in 2000. Relatively fewer C-3 District jobs would be held by San Franciscans. The percentage of all C-3 District jobs held by San Franciscans would decline from 55.5% in 1984 to 50.2% in 2000. These changes would be the result of cumulative development and employment growth in the C-3 District between 1984 and 2000.

It is important to understand the difference between the two percentages above. In each case, the same estimate of the number of jobs held by San Francisco residents is compared to an estimate for a larger group: to all employed residents of the City in the first instance and to all C-3 District employment in the second. These percentages both describe the same employment situation, but from different perspectives. The percentage of jobs held by City residents is used more often, primarily for transportation analysis. The percentage of City residents who work in downtown San Francisco is used less often. This latter perspective is a more direct measure of the role of downtown jobs in employing San Francisco residents.

The Downtown Plan EIR forecasts fall within the range of estimates of C-3 District workers living in San Francisco that was identified by the analysis of Alternatives in the Downtown Plan EIR. By 2000, the Alternative forecasts range from 189,000 to 193,000 C-3 District workers living in San Francisco. The relative comparisons described above apply to all the Alternatives; the percentage of total employed San Franciscans working in C-3 District jobs in 2000 would be higher than in 1984, while the percentage of C-3 District jobs held by residents would be lower.

The residence patterns of future occupants of the 1145 Market Street project can be estimated using information developed in the Downtown Plan EIR analysis. This approach assumes that employment densities for the building and residence patterns for those working in the building would reflect the average conditions for all similar buildings and occupants in the C-3 District in 2000. According to this approach there would be about 243 of 537 people employed in the project who would live in San Francisco. The project would account for about 0.1% of the 189,000 San Franciscans employed in the C-3 District in 2000 under the Downtown Plan EIR forecast.⁴

Estimates Based on the List of Office Projects in Downtown San Francisco

An alternative means of evaluating the cumulative effects of projects such as the proposed 1145 Market Street project is to use the list of all projects that are under construction, approved, or under formal review. (This list is discussed in Appendix B of this report. The list includes projects throughout the greater downtown, which includes the C-3 District as well as adjacent areas.) It is possible to calculate from the list the change in the number of downtown workers living in San Francisco associated with this amount of development. Adding this number to the 1984 base estimate of downtown workers residing in San Francisco produces an estimate of total downtown workers living in the City, once all projects on the list were built and occupied and the space created was absorbed. The results from this approach indicate that about 237,000 workers in the greater downtown area would live in San Francisco at that time.⁵

This approach uses data from the recent downtown employee surveys (as presented in the 1983 Transportation Guidelines) to estimate the residence patterns of future employees in the buildings on the list. Unlike the Downtown Plan EIR forecast approach, this approach incorporates no changes over time in either employment densities or residence patterns. It assumes that current average conditions (reflected in the recent surveys Transportation Guidelines) would continue throughout the buildout and absorption period for the list.

According to this approach there would be about 262 people out of 520 employed in the project who would live in San Francisco. The project would account for about 0.1% of all downtown workers living in San Francisco when all projects on the list were built and absorbed. The project would represent a smaller share of future activity in the greater downtown area than of activity in the C-3 District alone.

Differences in Cumulative Approaches

There are several important differences between the two approaches to cumulative analysis: the Downtown Plan EIR approach of forecasting space and employment and the approach of using a list of proposed projects. (A detailed comparison of the two approaches is presented in Section V.A, Introduction to Cumulative Impact Analysis.) The first approach incorporates forecasts of new development for all land uses (office, retail, hotel, and housing) and accounts for the demolition and conversion of existing space. The second approach accounts for the net addition of office and retail development. Moreover, the Downtown Plan EIR forecast methodology incorporates changes in economic activity and employment that would occur in the use of existing space, while the list method includes the changes accommodated by net new construction and some conversions.⁶ The Downtown Plan EIR forecast also includes employment growth, such as building maintenance and construction employment, that is not directly related to the occupancy of space. The Downtown Plan EIR forecast incorporates changes over time in residence patterns, reflecting changes in the regional distribution of population, housing, and employment. The list approach applies relationships derived from current conditions to the future situation, assuming no changes over time. The Downtown Plan EIR approach is currently limited to the C-3 District while the list covers a larger geographic area. In addition, there is no definite time frame associated with the list, although it is probable that the projects would be built and absorbed by the mid-1990s while the Downtown Plan EIR forecast represents a best estimate of the development likely to be built and absorbed from 1984 to 2000. It is because of these differences that the cumulative estimates of future residence patterns under each approach are not comparable. Within each approach, however, the project can be compared to the cumulative totals as described above.

Housing Market Implications for San Francisco⁷

There is a complicated series of interactions between employment growth and the housing market impacts of that growth. Throughout this process, adaptations or changes in conditions can be identified, but cannot be solely attributed to employment growth.

With continued employment growth there would be additional demand for San Francisco housing from people with strong preferences for living in the City and with the ability and willingness to pay for housing. This demand would be added to an otherwise competitive market with relatively high prices/rents.

At the same time, additional housing would be produced in San Francisco. There would be more additional supply relative to additional demand in the future than in the past. The primary reason is that housing market factors together with local policies and redevelopment programs are expected to support a larger addition of housing in the City than occurred in the past two decades. Nevertheless, San Francisco is unlikely to accommodate all of the households that would otherwise choose to live in the City. This is explained by the City's role as the employment center for a large region, by the limited land availability in the City, and by the higher costs of producing housing in San Francisco.

Downtown employment and employment growth will continue to be among the factors supporting a competitive housing market. It is unlikely that changes in housing demand due to downtown growth alone would be the cause of significant changes in prices and rents. Future housing prices and rents will depend on other factors besides downtown employment growth (such as interest rates and local land use policies and development costs throughout the region).

Not all of the additional downtown workers would live in San Francisco, however some would choose to do so. Many of the additional workers would be willing to pay higher prices for City housing to save on the time and cost of commuting from a more outlying location. Many of the additional workers preferring to live in San Francisco would be able to pay more for housing than some current residents.

Those workers who choose to live in the City would compete for the existing supply of housing. Those with greater financial resources would support the production of housing by the private market. Those with less financial resources would add to the competition for the stock of housing available at prices and rents below those needed for new construction. To the extent that prices/rents remain below this threshold, the supply of these types of units would not be expanded. Instead, prices/rents of existing units would be somewhat higher, occupancies would be higher (more people per unit because children live at home longer, more people live together, etc., and/or lower vacancies), and there would be pressures to upgrade the existing stock.

Competitive market pressures would be greatest for rental and for-sale housing priced below average, particularly for units below the threshold prices/rents for new housing production. Increased competition in an already competitive market, the relatively high threshold for new construction, and the large pool of consumers (not just downtown workers) with preferences for the older housing stock in San Francisco, all would result in more housing consumers seeking these types of units. The purchase and upgrading of lower-cost older housing is the first step in the process of neighborhood change known as gentrification. Often, existing lower-income residents can be "priced out" of their housing in the upgrading process.

Higher prices and rents, particularly for the relatively lower-cost housing in older neighborhoods, would have various implications over time, for those in the housing market as well as for other existing residents. Some people would decide not to move into the City and some existing residents would move out of the City for more acceptable housing elsewhere. Many individuals would continue to live in San Francisco and pay higher prices/rents for the same City housing. Still others, those unable or unwilling to pay more, would accept City housing which does not fully meet their preferences or needs. Those with the fewest resources to pay for housing (low and some moderate income households) would bear the greatest share of the negative impacts of a housing market with higher prices/rents. These impacts vary--households could move to less satisfactory housing in the City or elsewhere, or more household members could have to contribute to housing expenditures (either within the existing household or because people decide to live together to combine their incomes). It is more likely that the poor will continue to live in the City, although in more crowded or otherwise inadequate housing, than move outside the City. And finally, owners of existing units would benefit to the extent that their housing appreciates. It is not possible to quantify how many households would be affected in each of these ways.

This scenario of future housing market conditions in San Francisco implies that housing affordability will continue to be a problem for many of the City's households. The additional demand due to downtown employment growth would add to a future housing market situation in which many households, particularly those with incomes below the threshold needed to support new production, are expected to be paying a larger

percentage of their incomes for housing or accepting less housing services than in the past.

Generally, those households with fewer financial resources available to pay for housing would make the most sacrifices in adapting to more competitive market conditions. They have less ability to compete for housing and fewer housing options. San Francisco currently has and will continue to attract a large number of persons that will be faced with these difficulties in securing housing. They include renters, younger persons, those holding entry level jobs, the elderly and others on fixed incomes, newly-arrived immigrants as well as other poor and unemployed persons.

The proposed project, as part of the future pattern of downtown office development, would contribute to these housing market impacts. The project's individual contribution cannot be separately identified.

Regional Perspective on Residence Patterns and Housing

The residence patterns of San Francisco workers can also be considered from a regional perspective. In fact, future labor force, housing, and employment throughout the region were important factors in the Downtown Plan EIR residence patterns forecasts. Expected trends in labor force participation, workers per household, housing production, and employment growth provided the future regional context in which the Downtown Plan EIR forecasts were prepared.

Table 9 presents residence patterns forecasts for C-3 District workers as prepared for the Downtown Plan EIR and an alternative residence patterns forecast for downtown workers using the March 22, 1985 list of downtown projects.⁸ Both residence forecasts are also shown as percentages of the total employed population in each part of the region, as forecast by the Association of Bay Area Governments (ABAG).²

The Downtown Plan 1984 EIR estimates and forecasts for 2000 (first three columns on the left) indicate that the largest number of C-3 District workers would live in San Francisco, followed by the East Bay, the Peninsula, and the North Bay. The largest increase of C-3 District workers would be for those living in the East Bay, followed by San Francisco, the Peninsula and the North Bay. The next three columns compare the Downtown Plan EIR

residence patterns forecasts for C-3 District workers to ABAG's forecasts of total employed residents throughout the region. C-3 District workers would represent a relatively large share of all employed San Franciscans and relatively smaller proportions of the labor force in other Bay Area counties. Comparing 1984 and 2000, there would not be major changes in the C-3 District percentages of the labor force in each area. The same conclusions would apply in the case of any of the five Alternatives to the Downtown Plan.

The residence patterns forecast using the list of downtown projects leads to similar conclusions. In this case, the residence patterns for downtown workers do not consider changes over time in regional labor force, housing, and employment.⁹ The downtown workers estimated using this approach also represent a large share of both the totals and the growth of employed residents in San Francisco and relatively smaller shares of both the totals and growth of employed residents elsewhere in the region. As in the case of the Downtown Plan EIR forecast in 2000, there would not be large changes from the 1984 percentages showing downtown workers relative to the rest of the region's labor force.

Because housing supply assumptions, as well as labor force and employment trends, are the basis for the forecasts, the above observation that the changes over time in the downtown worker percentages of the region's employed population in each area would not be large indicates that downtown workers would not require much larger shares of the region's housing in the future than they do now. In other words, a housing stock consistent with local policies could accommodate both future downtown workers and future workers elsewhere in the region.

TABLE 9
REGIONAL PERSPECTIVE ON RESIDENCE PATTERNS

	Downtown Plan Forecast of Residence Patterns of C-3 District Workers ¹				List-Based Forecast of Residence Patterns Of Workers in Greater Downtown Area ²			
	Number of Workers		Percent of Total Employed Population In Each Part of Region ³		Number of Workers		Percent of Total Employed Population In Each Part of Region ³	
	Total 1984	Total 2000	Total 1984	Change 1984-2000	Total 1984 ⁴	Change from 1984 ⁵	Total 1984	Change from 1984 ⁵
San Francisco	159,000	189,000	45%	30,000	198,000	237,000	57%	39,000
East Bay	73,000	110,000	7	37,000	94,000	118,000	9	24,000
Peninsula	35,000	48,000	3	13,000	46,000	55,000	5	9,000
North Bay	19,000	29,000	7	10,000	27,000	34,000	10	7,000
TOTAL	286,000 ⁷	376,000 ⁷	11%	90,000	365,000	444,000	14%	79,000

¹ Includes permanent employment and annual average construction employment. Incorporates changes in employment for office, retail, hotel and other uses.

² There is no time frame associated with development of the projects on the list. This amount of space would probably be absorbed in the mid-1990s. If all the projects on the list were built before the year 2000, there would be more development (not currently on the list) and thus more workers in the downtown area by that year. In this case, the percent of the regional employed population in 2000 would be higher than shown here.

³ Forecasts of employed residents in Bay Area counties from ABAG, Projections '83. ABAG presents forecasts of employed residents for 1985 and 2000. For comparability with the cumulative analyses (which use 1984 as the base year), ABAG's 1980 to 1985 projections were prorated over the five-year period to estimate 1984 conditions for the region.

⁴ The 1984 estimate of total employment in the greater downtown area includes C-3 District estimates from the Downtown Plan EIR and order-of-magnitude estimates for the other downtown areas in that year. For the future employment estimate, estimates of employment growth from the development of buildings on the March 22, 1985 list are added to the 1984 base year totals. See note 5.

⁵ This estimate is based on all projects on the list except those included in the Downtown Plan EIR 1984 base year estimate. The estimates of employment and residence patterns for projects on the list are based on data in the Transportation Guidelines, September 1983.

⁶ The ABAG forecasts of employed population in each area of the region in 2000 are used for this calculation. As mentioned in note 2, the projects on the list are likely to be built and absorbed in the mid-1990s. Therefore, by the year 2000, more development (and thus more workers) could be expected and the percentages of the total regional employed population would be higher.

⁷ The Downtown Plan EIR forecasts include some workers who would live outside the Bay Area. This is a small number and is not shown here.

Source: Recht Hausrath & Associates and EIP Associates

As part of total regional employment growth in the future, increases in downtown employment can be viewed as contributing to regional housing demand. A strong regional economy has and will continue to be a factor supporting a competitive regional housing market with relatively high housing prices and rents. By itself, downtown growth would make only a small difference in the region's housing market outside of San Francisco. If downtown growth did not occur and all other employment growth and housing market factors remained as forecast, it is unlikely that the Bay Area's future housing market would be very different from what would otherwise occur with downtown growth.

All other things being equal, regional employment growth would mean higher prices and rents for housing than would otherwise be the case in the future. It would also mean lower housing services (less acceptable housing conditions at the same, or higher, price) for some of the region's households. How much difference (higher prices/rents or lower services) depends on other housing market factors besides employment growth (interest rates, land use policies, other demand factors, etc.). It also depends on the amount of employment growth. Downtown employment growth alone would have less impact than total regional growth.

The housing impacts of employment growth are not uniform throughout the region. Generally, there will be more effects in nearby communities than in those further from the location of job growth. The main reason is that, all other things being equal, households have a preference for residential locations closer to places of work and can pay more for housing at a closer location because they are not paying the higher transportation costs they would otherwise pay at a more distant place.

¹For a description of the methodology used to forecast residence patterns, see Appendix I, Downtown Plan EIR, pp. I.8-I.30. For a description of existing and forecast future residence patterns of C-3 District workers, see Downtown Plan EIR, Section IV.D, Residence Patterns and Housing. Also see Downtown Plan EIR Summary of Comments and Responses, pp. C&R-D.82 - C&R-D.83 (which is hereby incorporated by reference pursuant to State CEQA Guidelines) for a discussion of the role of the residence patterns forecasts in analyzing future housing market conditions.

- ² Association of Bay Area Governments, Projections '83. This report presents forecasts from 1980 to 2000 of population, employment, households and employed residents for each of the nine Bay Area counties.
- ³ Downtown Plan EIR, page IV.D.67.
- ⁴ In order to ensure consistency with the cumulative transportation analysis and to provide information on regionwide impacts, this section does not use the OHPP and 101 Montgomery formulas for estimating the number of workers who would live in San Francisco. These formulas only provide estimates of office workers living in San Francisco; they do not include factors for estimating workers living in other parts of the region. These formulas were applied to the project in the project-specific impact section of the original FEIR, page 74.
- ⁵ For the 1984 estimates of workers in the greater downtown area, the C-3 District estimates of employment and residence patterns prepared for the Downtown Plan EIR were used as a base to which order-of-magnitude estimates for that year for the other downtown areas were added. Downtown survey data (C-3 District and South of Market/Folsom) presented in the Transportation Guidelines were used to estimate employment and residence patterns for projects on the March 22, 1985 list for the greater downtown area. The workers associated with these new projects were added to the 1984 base year total estimate.
- ⁶ As explained in the Downtown Plan EIR, the use of existing space is expected to intensify by the year 2000. For example, office employment growth is forecast to exceed the growth of employment that would be accommodated by the development of new office space. From 1990 to 2000, more intensified use of existing space would be equivalent to about a 40% increase in the net addition of office space for that period. (See p. IV.B41 in Downtown Plan EIR.)
- ⁷ This subsection presents a summary of the discussion in the Downtown Plan EIR as explained in the Downtown Plan EIR Summary of Comments and Responses (see pp. C&R-D.83 - C&R-D.94) [(see pp. IV.D.77 - IV.D.82 and pp. I.1 - I.8)], which is hereby incorporated by reference pursuant to State CEQA Guidelines, Section 15150.
- ⁸ As explained earlier, there are several differences in the estimates of employment and residence patterns derived from these two approaches to cumulative analysis. The most important differences are apparent in the two employment estimates shown in this table. The Downtown Plan employment totals for the C-3 District are smaller than the total employment estimate for the greater downtown area, primarily because the latter estimate covers the C-3 District, plus other areas such as the south of Market area, Civic Center, and the northern waterfront. The employment growth for this larger downtown area is smaller than the C-3 District growth, however, because employment forecasts based on the list of downtown projects also do not incorporate changes in the use of existing space, such as increasing office employment densities.

⁹The distribution of downtown workers among the Bay Area counties is based on the residence patterns forecasts for 1984 prepared for the Downtown Plan EIR and on the Department of City Planning's Transportation Guidelines for Environmental Impact Review, September 1983.

VI. MITIGATION MEASURES

The mitigation measures described in the FEIR as "Measures Proposed as Part of the Project" were part of project plans and were also incorporated as conditions of project approval by City Planning Commission Motion No. 9837M. Measures not described in the FEIR, whether or not they were part of the project, are described below.

The mitigation measures are generally imposed on a per-square-foot basis because an individual office building project contributes to the cumulative impacts in proportion to its contribution to additional employment in downtown, which is related to the space provided in the new building. No individual building contributes disproportionately--geometrically--to the overall cumulative impacts. Therefore, insofar as mitigation measures have been imposed on a per-square-foot basis where possible (e.g., Transit Impact Development Fee, Office-Housing Production Program), the project will contribute its appropriate share to the overall measures which combine to reduce cumulative effects of increases in office space downtown. Where mitigation measures are not appropriately imposed by square footage, such as provision of a transportation broker to encourage transportation systems management, all projects similarly situated have had such a measure uniformly required, as has the project covered by this Supplemental EIR.

A. TRANSPORTATION

Measures Included as Part of Project

The following measure reducing the project's contribution to cumulative parking demand effects were not described in the FEIR but were required as part of project approval and are considered to be part of the project:

1. The project sponsor shall: (a) participate with other project sponsors and/or the San Francisco Parking Authority in undertaking studies of the feasibility of constructing

an intercept commuter parking facility in a location appropriate for such facility to meet the unmet demand for parking for those trips generated by the project which cannot reasonably be made by transit, and (b) participate with other project sponsors and/or the Municipal Railway in studies of the feasibility of the establishment of a shuttle system serving the project site and the parking facility.

Environmental Impact Reports prepared for other projects, subsequent to the FEIR on the 1145 Market Street project, have included more extensive cumulative analyses than that FEIR but have not resulted in adoption of any new standard mitigation measures that would reduce cumulative transportation effects caused by an individual project. This is in part because the Transit Impact Development Fee (TIDF) imposed on this project by ordinance and as a condition of approval is based largely on the incremental contribution of each project to the total cumulative impact of development on the transit system. Because the TIDF imposes a fee on a per square foot basis, a larger amount of development would contribute a larger sum toward mitigation and the project would have contributed its proper share. The TIDF was challenged in a lawsuit (Russ Building Partnership v. City and County of San Francisco) and was upheld in Superior Court (September 27, 1984). If this decision were to be overturned at the Court of Appeal, however, conditions already imposed on the project require that in the alternative the project sponsor will contribute to another equitable transit funding mechanism established by the City. Other measures that would reduce cumulative city-wide and regional transportation effects could be implemented by public agencies but are not feasible or appropriate for individual project sponsors as noted below.

Measures That Could Be Implemented by Public Agencies

If the City were to adopt and implement the transportation improvements described in the Downtown Plan, cumulative transportation impacts would be reduced within San Francisco and, to the extent that San Francisco could influence transportation improvements recommended in the Plan for areas outside the City, adoption of the Plan would reduce regional cumulative impacts caused by downtown growth. The Downtown Plan was adopted by the City Planning Commission in October 1984. Final action on the Plan is expected by the Board of Supervisors by August 1985.

- Recognizing that intersection gridlock is the result of motorists not complying with the existing traffic laws that prohibit a vehicle from entering an intersection if that vehicle cannot exit the intersection, the Police Department could expand its program of point traffic control to either cover more intersections and/or operate during longer time periods on weekdays. This measure would require either diverting sworn officers from patrol work or the hiring of additional traffic controllers.

Should the Downtown Plan not be implemented, the City could act to implement the transportation mitigations described in Section V.E., Mitigation, pages V.E.4-28, in the Downtown Plan EIR. These measures are similar or identical to those in the Downtown Plan and include, in summary: measures to construct and maintain rail rapid transit lines from downtown San Francisco to suburban corridors and major non-downtown centers in San Francisco; measures to fund Vehicle Acquisition Plans for San Francisco and regional transit agencies to expand existing non-rail transit service; provide exclusive transit lanes on City streets and on freeways; reduce incentives to drive by reducing automobile capacities of bridges and highways in certain circumstances and by discouraging long-term parking; measures to encourage carpools, vanpools, and bicycle use; and measures to improve pedestrian circulation within downtown San Francisco.¹ Some of the Implementing Actions would require approval by decision-makers outside the City and County of San Francisco; many of the measures would require action by City agencies other than the City Planning Commission, such as the San Francisco Public Utilities Commission and/or Board of Supervisors. These measures are system-wide measures that must be implemented by public agencies. Other than project-specific measures such as the parking mitigation measure described above as part of the project or such as the Transit Development Impact Fee assessment required by San Francisco Ordinance 224-81 which contribute indirectly to implementation of these system-wide measures, it is not appropriate or reasonable to impose mitigation at system-wide levels on individual projects.

Since a substantial portion of the office space analyzed in this Supplemental EIR and shown to contribute to cumulative impacts has yet to be approved, one mitigation measure available to the City is the ability of the City Planning Commission to limit the contribution of future projects to the cumulative impacts by denying or limiting approvals for such projects on a case-by-case basis. The ability to withhold approval of future projects, based upon environmental impacts and available mitigation measures resulting from development, is clearly within the discretion granted to the Commission.

Measures Not Included As Part of the Project

The following measures would contribute to mitigation of cumulative transportation impacts but are not included as part of the project:

1. The project could be redesigned to reduce the total amount of office space or put some space previously committed to office use into a non-office use that would not cause a substantial contribution to cumulative impacts. This measure would reduce the number of new employees with jobs in downtown who are likely to contribute to cumulative transportation, air quality, energy and housing impacts. The reduction would not necessarily reduce the number of employees in direct proportion to any reduction in office space, since some firms that might otherwise have occupied the former "office" space could merely increase employee density. To the extent that fewer people were employed downtown who would be likely to contribute to peak period transportation impacts, the cumulative transportation impacts would be less, although the project's share of total cumulative effects would be reduced by a lower proportion since the project and the total cumulative would both be reduced by the same amount. The project sponsor has rejected this measure because the project is already approved and project economics were based on occupancy as originally designated. The City Planning Commission will determine whether or not to impose the measure as a condition of approval.
2. Increasing contribution requirements over and above the present \$5.00 per sq. ft. requirement imposed by San Francisco Ordinance 224-81 (Transit Impact Development Fee) would provide further funding to San Francisco for transit and parking and possibly traffic impact mitigation, depending upon the purposes for which the fees might be designated. These fees might allow transportation improvements such as those described in the Downtown Plan EIR to be implemented earlier than would be possible through Federal, State or other City funding. The City Planning Commission has not been delegated the authority to require such mitigation. CEQA does not confer on the decision-maker independent authority to mitigate where separate legislative authority is not otherwise available. (Pub. Res. Code Section 21004.)

B. AIR QUALITY

Measures that would reduce transportation impacts by reducing the number of vehicle miles traveled would reduce cumulative air quality effects.

C. HOUSING

In litigation in the Superior Court in SFRG v. City and County of San Francisco, the Court effectively held that impacts on housing are not environmental impacts requiring discussion in an EIR. That ruling was not appealed to the Court of Appeal. For the sake of providing the fullest possible information to the City Planning Commission and the public, housing impacts and mitigation measures are included in this Supplemental EIR. Actions taken by the project sponsor to comply with housing mitigation conditions are detailed in Appendix E.

The following mitigation measure reducing the project's contribution to cumulative housing impacts in San Francisco was required as part of project approval but was described differently in the FEIR:

"In Order to help meet the housing demand generated by this project, the project sponsor and/or successive project owners shall meet a housing requirement of 93 credits. . . .Construction and/or rehabilitation of required housing shall be completed within three years following issuance of a Temporary Certificate of Occupancy for the Project. . . .Rehabilitation within the context of this condition means the return to the housing market of units that have been vacant for reasons other than making them eligible for satisfying this condition for at least one year. . . ."

By December 1984, the project sponsor had complied with a portion of the required mitigation measure by having constructed or started construction on 32 new housing units counted as 61 housing credits, consisting of nine two-bedroom units at 575, 577 and 579-27th Street counting as 18 credits, 13 two-bedroom units and 3 studio units at 1059 Union Street counting as 29 credits, and seven two-bedroom units at 666-678 Grandview Street counting as 14 credits. There is an outstanding balance of 32 credits to be met to fully comply with the mitigation measure. The project sponsor intends to build housing in San Francisco to fulfill this obligation.

By complying with the Commission's Office Housing Production Program Guidelines, the project has reduced or will reduce project-specific contributions to cumulative housing impacts in San Francisco to an acceptable level. The Commission has no jurisdiction to require housing construction in other localities.

D. ENERGY

The project is required to comply with Title 24 Energy Standards and thus would not breach state standards for energy consumption. However, in order to provide for possible further reductions in energy consumption, the following additional measures were included as a condition of approval and is therefore included as part of the project:

"One year after occupancy of the structure, actual energy consumption, converted to thousands of British Thermal Units, from Pacific Gas and Electric monthly billings, shall be reported to the Department of City Planning by the project sponsor. If consumption exceeds energy use projections contained in the EIR, a PG&E or other certified energy audit shall be performed, and a copy supplied to the Department of City Planning. Those recommended energy conservation measures which have a 3-year or less payback shall be implemented by the project sponsor."

The measures included as part of the project would reduce energy impacts to an insignificant level.

¹ Department of City Planning, Downtown Plan Environmental Impact Report, EE81.3, certified October 18, 1984, Section V.E., "Transportation and Circulation," pp. V.E. 4-28. This material is hereby incorporated by reference and is summarized in the above text.

VII. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

Chapter V, page 47 of the FEIR is changed in the following ways:

Add at the beginning of the chapter:

"The following are expected significant impacts subject to final determination by the City Planning Commission as part of its certification process. Chapter VII of the Final Supplemental EIR will be revised, if necessary, to reflect the Commission's findings.

"This chapter identifies significant cumulative environmental impacts that could not be eliminated or reduced to an insignificant level by mitigation measures included as part of the project, as described in Chapter VI, Mitigation."

Replace Section "A. Cumulative Office Development" with "A. Transportation"

"The project would be part of a trend of denser development in downtown San Francisco. The project would contribute to cumulative traffic increases on downtown streets and on freeways and bridges near downtown San Francisco, and would contribute to cumulative passenger loading impacts on Muni, BART and other transit carriers. Mitigation measures are available which would reduce these effects on a system-wide basis; these mitigation measures could be implemented by the City and County of San Francisco and other agencies with jurisdiction over highways, bridges and transit systems but could not be implemented by individual project sponsors."

Section "B. Energy" is omitted because contributions of the project to possible cumulative impacts on energy use have been mitigated to a level of insignificance by measures required as part of the project approval.

VII. Significant Environmental Effects

Add a new section "B. Air Quality" as a new paragraph as follows:

"The project would contribute to possible violations of total suspended particulate ● standards.

● VIII. ALTERNATIVES

● ALTERNATIVE 5: DOWNTOWN PLAN ALTERNATIVE

Description

This alternative would consist of a project directly complying with the City Planning Code as revised to implement the Downtown Plan (Ordinance 414-85, effective October 17, 1985).

The Downtown Plan Alternative would entail a project similar in use and bulk but would be smaller and lower than the project as currently proposed (see Figure 3A, page 101b). The building would be built to 7 stories (112 ft.), (127 feet to top of mechanical penthouse), 5 stories (60 ft.) shorter than the project as currently proposed. In total, this alternative would contain 87,150 gsf of office space (50,050 gsf or 36.5% less than the current project) and 8,000 gsf of retail space (the same as the current project). The FAR for this alternative would be 6:1, compared to 10:1 for the current project. The alternative would contain 1,750 gsf of public open space, as required by the Downtown Plan. As with the current project, there would be no on-site off-street parking provided. This alternative would include two off-street freight loading spaces, one more than in the current project.

Along Market Street, the roof line of the alternative would be at 112 feet. There would be a 25-foot setback at 85 feet and another at 98.5 feet. Although the height of the alternative would be decreased compared to the current project, other design features, including facade treatment and materials would be the same as in the current project.

Impacts

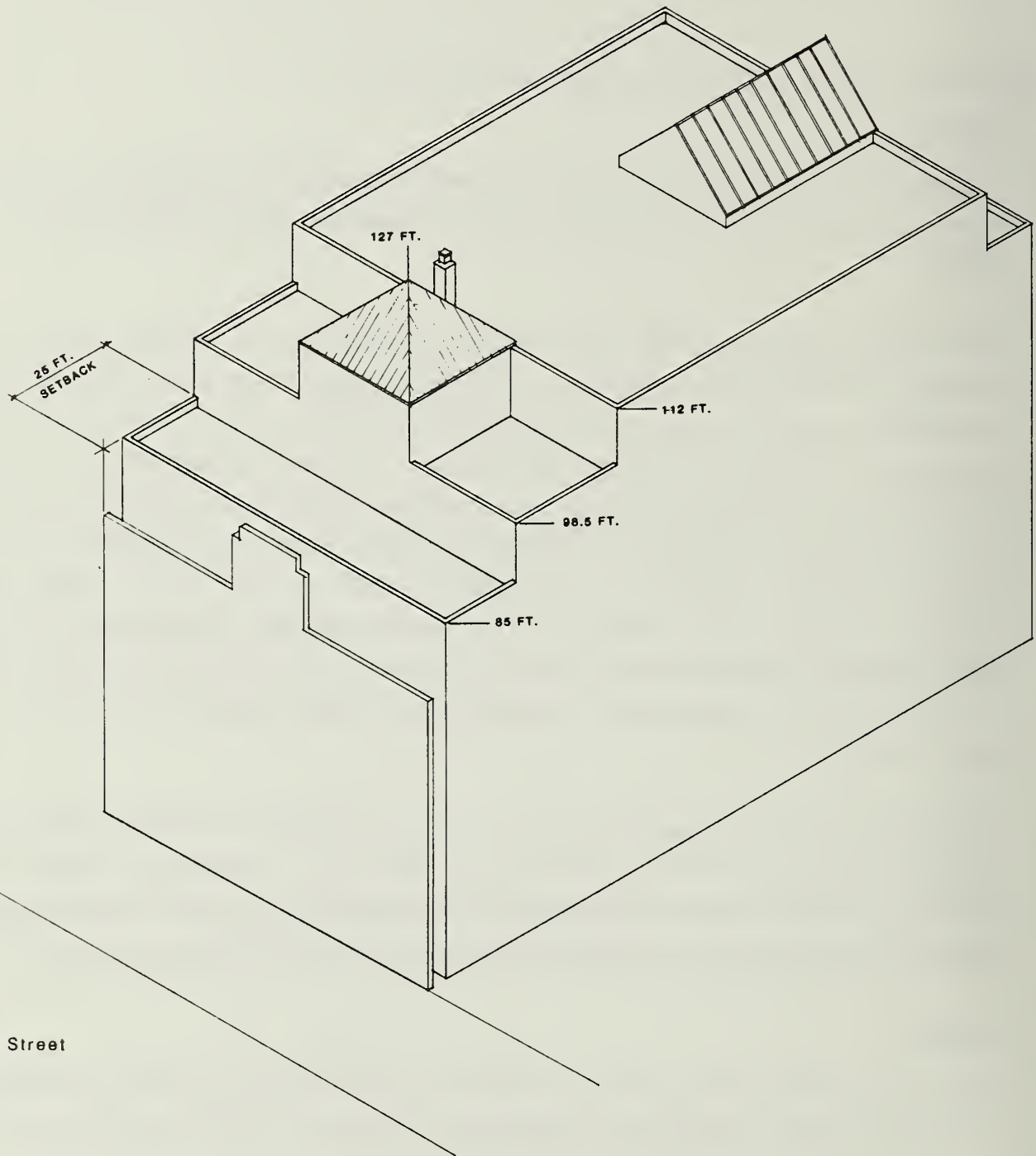
The office and retail space in this alternative would be 50,050 gsf (34.5%) smaller than the proposed project, resulting in a proportional decrease in land use impacts which are

1145 MARKET STREET ALTERNATIVE FIVE: DOWNTOWN PLAN ALTERNATIVE

FIGURE 3A

SOURCE: BACKEN, ARRIGONI AND ROSS

FEET
0 16 32 64



Market Street

due to increases in intensity and type of uses on the project site. Since the height of this alternative would be 60 feet less than that for the current project and 34 feet less than the adjacent 1055 Market building, the alternative would have less impact on building scale in the project vicinity than the current project. This alternative would be similar in height to the existing older development along mid-Market Street.

There would be 25 percent less traffic generated as a result of this alternative than for the current project with resultant decreases in impacts on transit, local traffic, parking occupancy and the street network as compared to the current project; a smaller percentage decrease than the overall decrease in space due to a greater proportion of retail space to office than in the project. Traffic generated air quality impacts would decrease proportionately with the decreased travel demand, as compared to the proposed project.

At 10:00 a.m. on March 21, the alternative would cast new shadows along Market Street and on a portion of the sidewalks on the north side of Market, opposite the project site. By contrast, the proposed project would cast shadows onto the southeastern corner of U.N. Plaza at that time. By noon, the alternative and the proposed project would cast shadows on Market Street with south side sidewalks covered by shadows from existing buildings. By 2:00 p.m. neither the alternative nor the proposed project would cast new shadows.

Morning shadows, the longest in the direction of U.N. Plaza would become shorter as June 21 approaches. By that time, neither the alternative nor the proposed project would cast any new shadows on U.N. Plaza.

Shadows would elongate through the summer. By September 21 conditions would be similar to those described above for March 21.

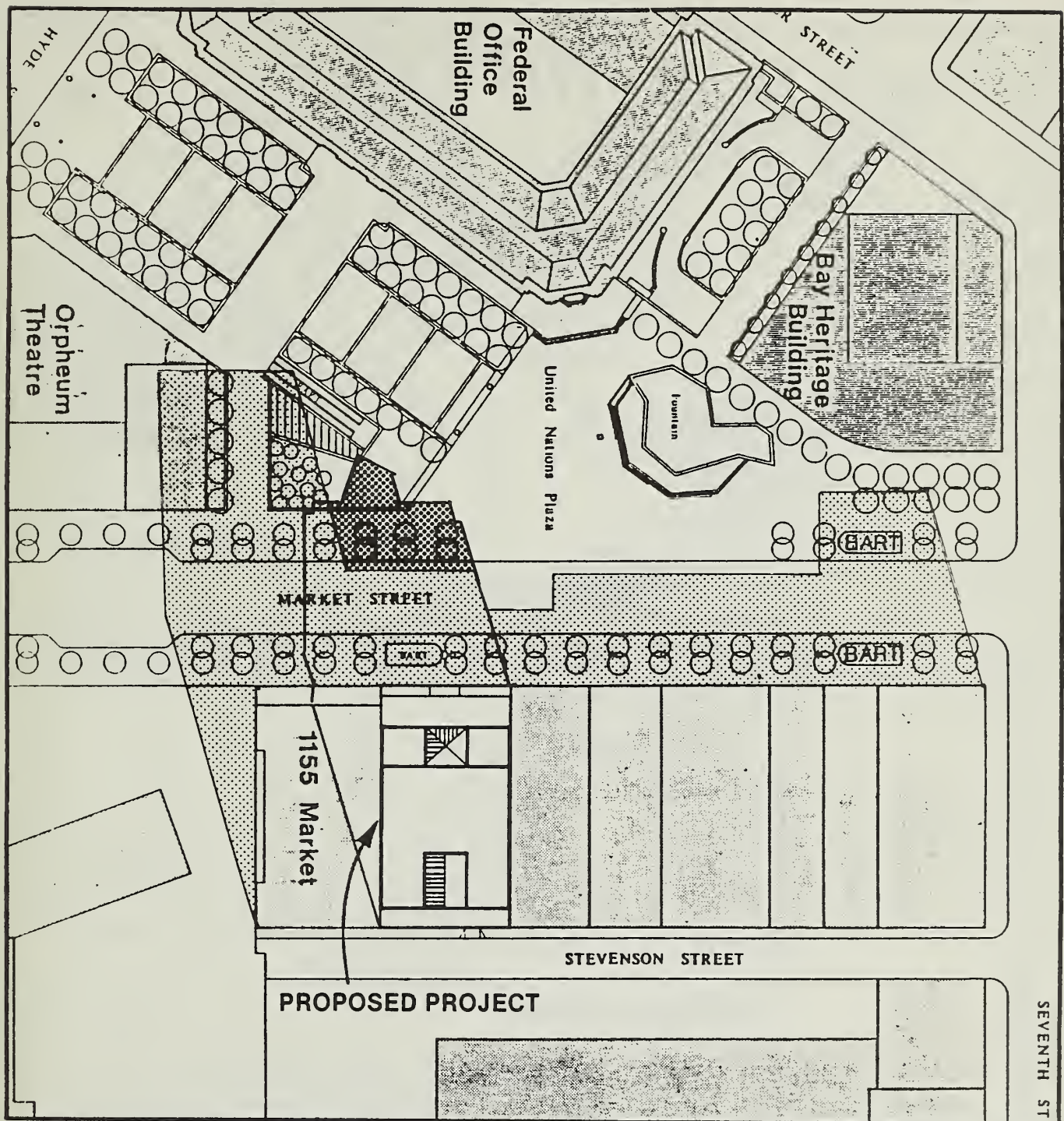
The new shadows cast by the alternative would occur in the mornings in the fall, winter and spring. On December 21, at 10:00 a.m. the alternative would add shadows on the western portion of U.N. Plaza, reaching the steps of the Federal Office Building, but not as extensive as those cast by the proposed project which go beyond the front steps. The alternative would not add any new shadows along Market Street in the afternoon since existing shadows cover the street and sidewalk compared to the proposed project which

would continue to cast shadows on U.N. Plaza at this time. By 3:00 p.m. on this date neither the alternative, nor the proposed project, would add any new shadows along Market Street or on U.N. Plaza.

Figures 4 through 14 describe the new shadows that would be cast by the alternative.



Reasons for Rejection

The project sponsor would reject this alternative because (1) the proposed project has already been approved by the City Planning Commission and (2) removal of stepped back upper floors would reduce the number of open-air balconies suitable for potted plant materials as decorative elements and would weaken a definition of the building's mid-section.



Shadow Patterns : Alternative Five

FIGURE 4

-  EXISTING SHADOWS
-  SHADOWS ADDED BY ALTERNATIVE FIVE

DATE

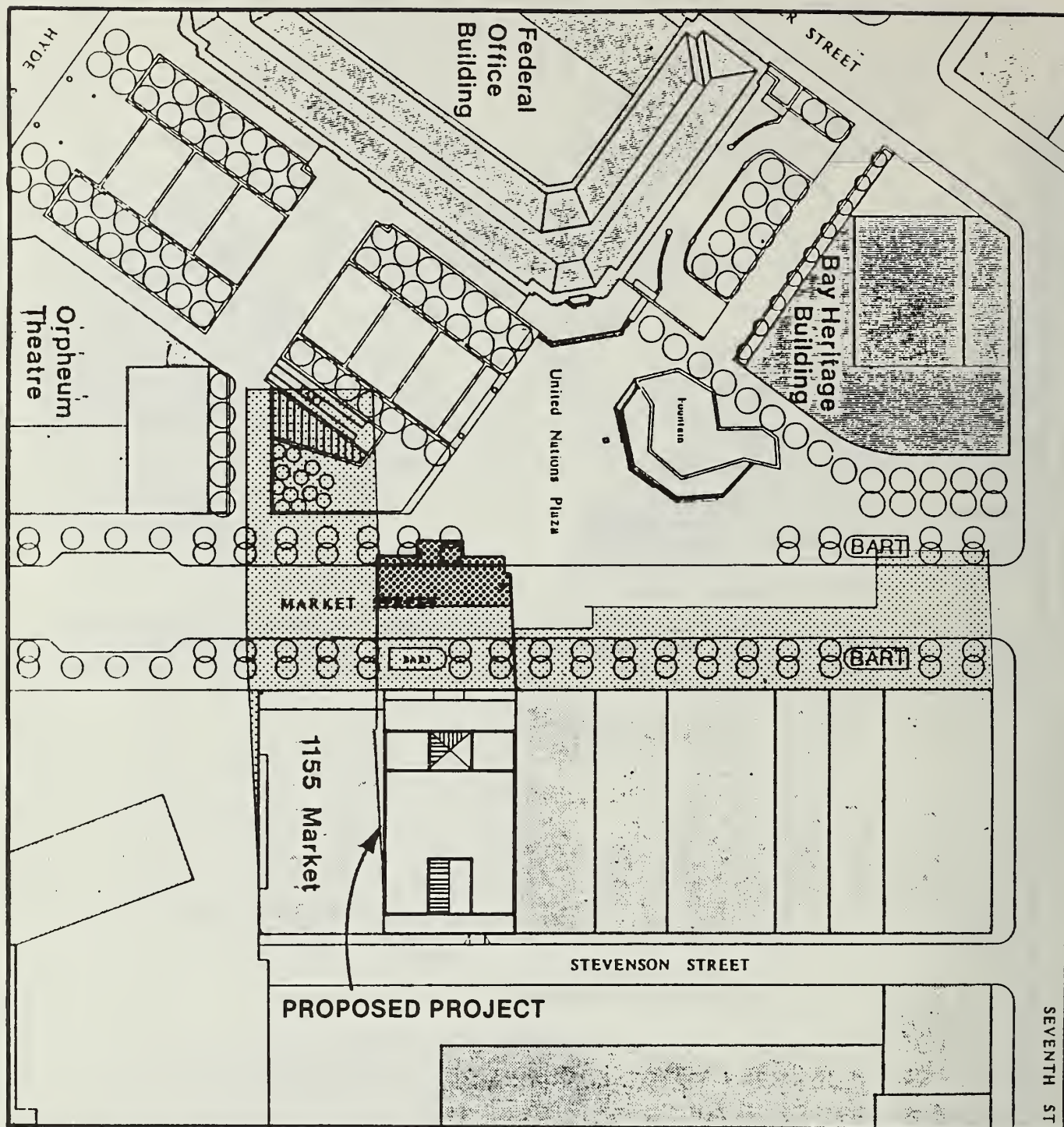
MARCH 21

TIME

9:00 AM PST

FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 5



EXISTING SHADOWS



SHADOWS ADDED BY
ALTERNATIVE FIVE

DATE

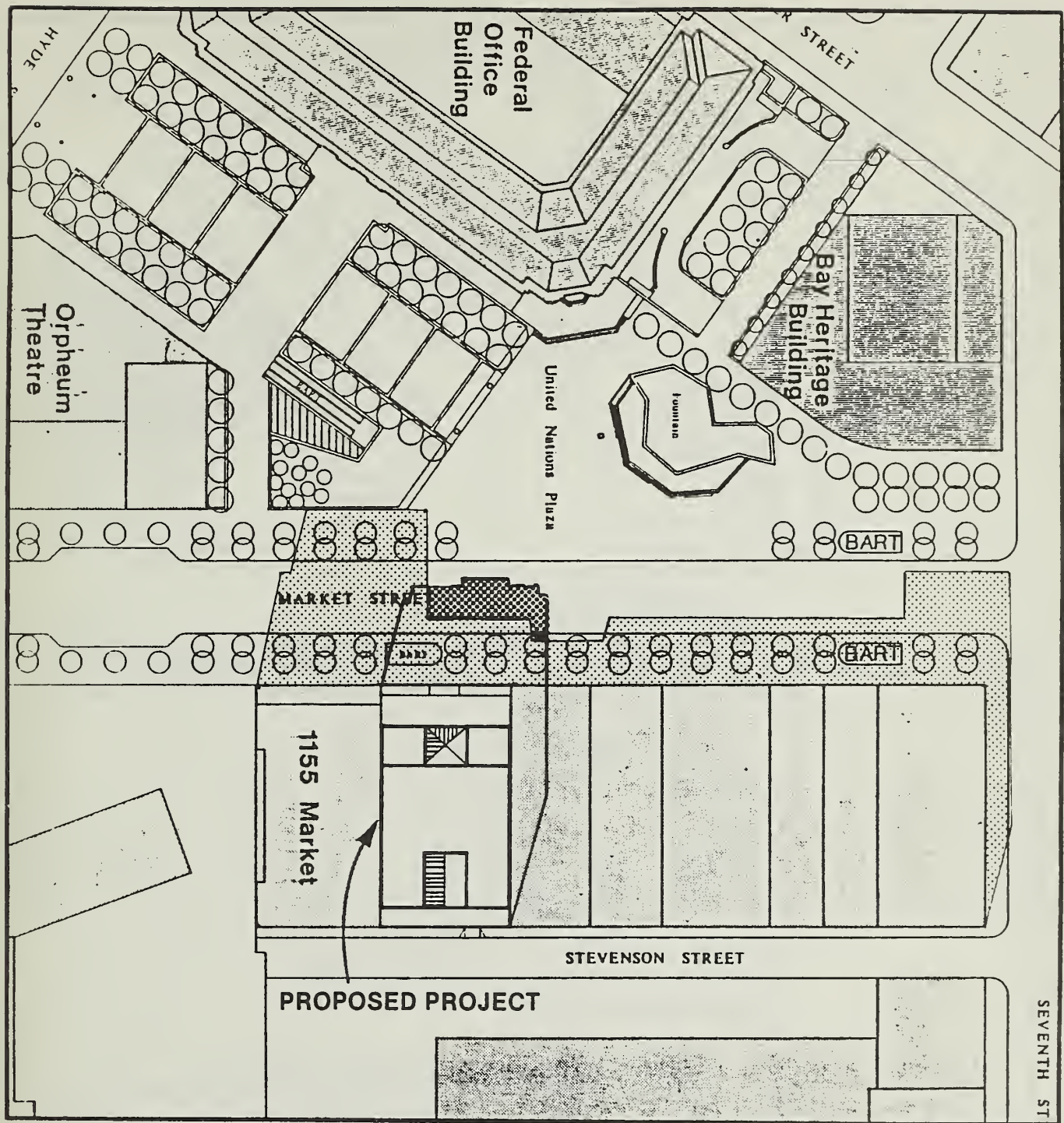
MARCH 21

TIME

10:00 AM PST



FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 6

-  EXISTING SHADOWS
-  SHADOWS ADDED BY ALTERNATIVE FIVE

DATE

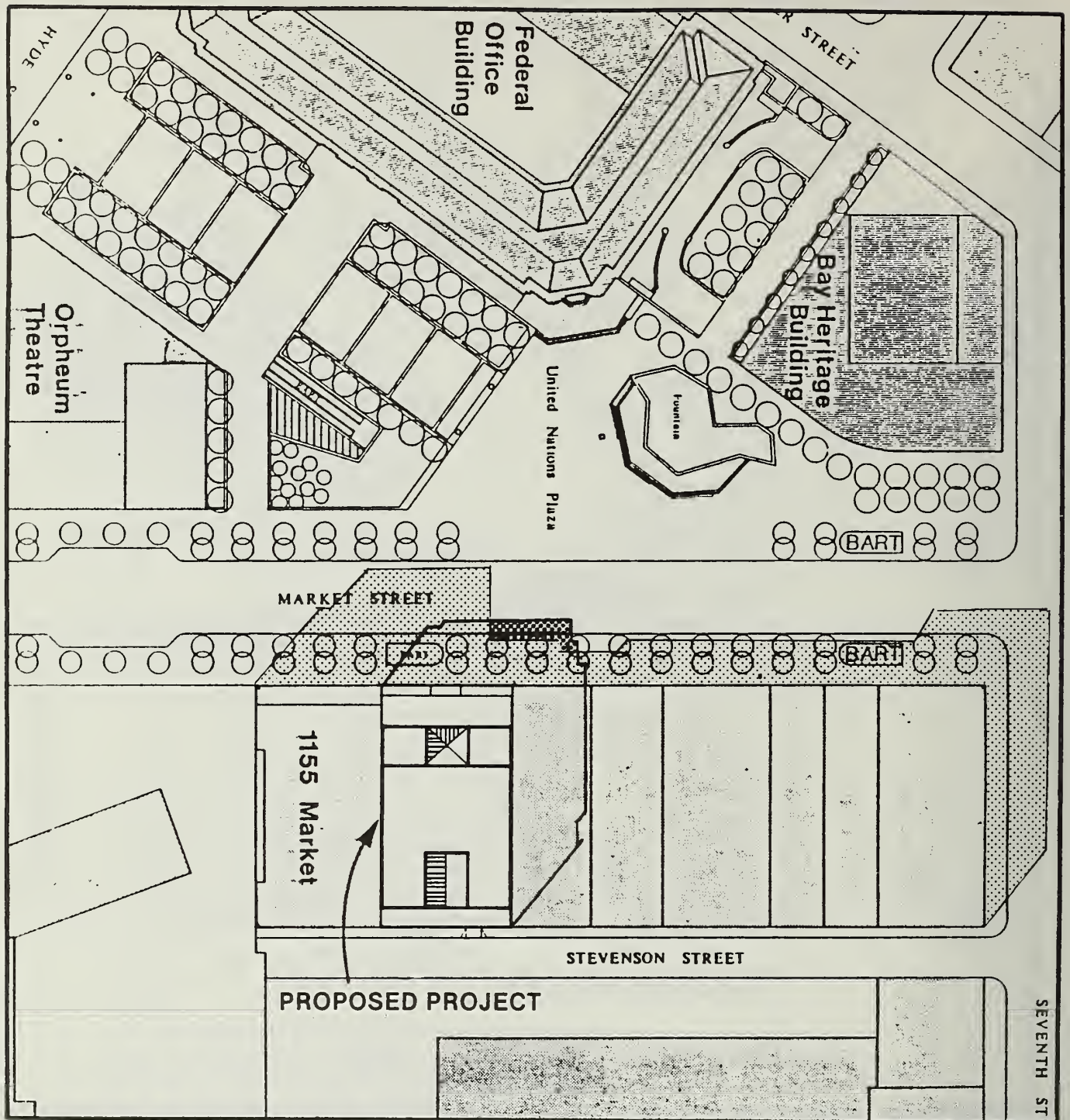
MARCH 21

TIME

11:00 AM PST



FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 7

-  EXISTING SHADOWS
-  SHADOWS ADDED BY ALTERNATIVE FIVE

DATE

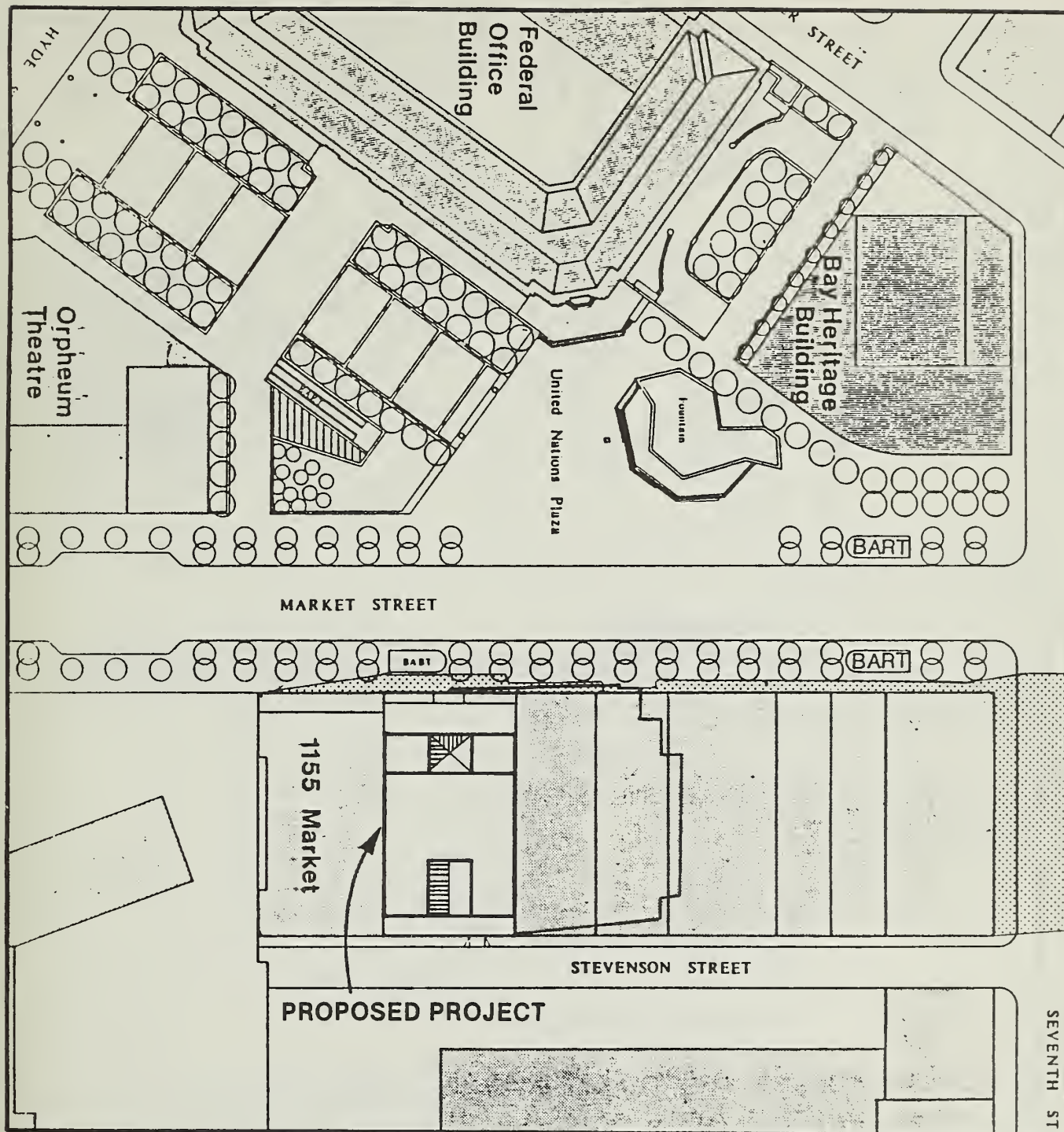
MARCH 21

TIME

12 NOON PST



FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 8

-  EXISTING SHADOWS
-  SHADOWS ADDED BY ALTERNATIVE FIVE

DATE

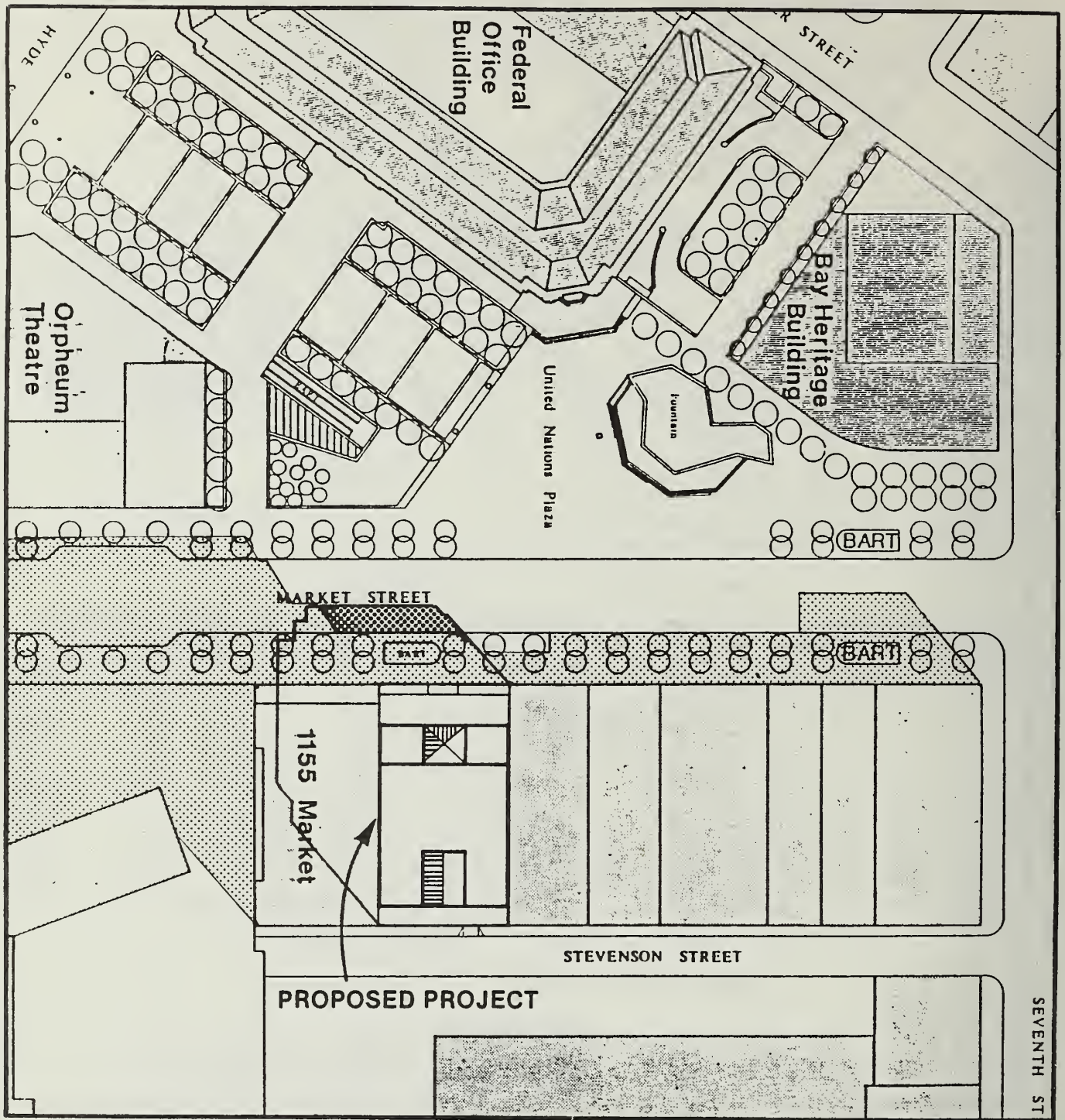
TIME

MARCH 21

2:00 AM PST



FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 9

-  EXISTING SHADOWS
-  SHADOWS ADDED BY ALTERNATIVE FIVE

DATE

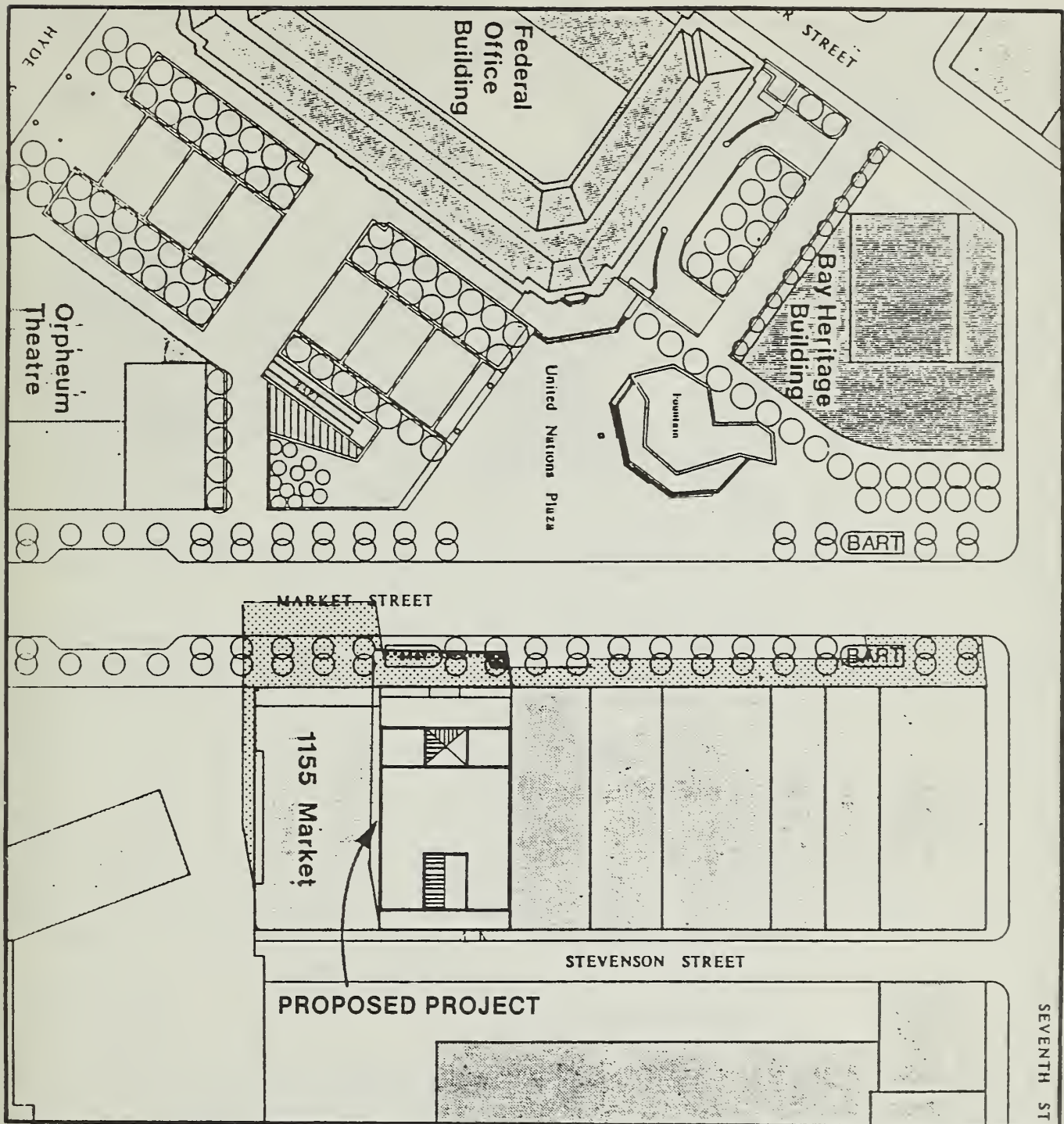
JUNE 21

TIME

10:00 AM PST

FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 10



EXISTING SHADOWS



SHADOWS ADDED BY
ALTERNATIVE FIVE

DATE

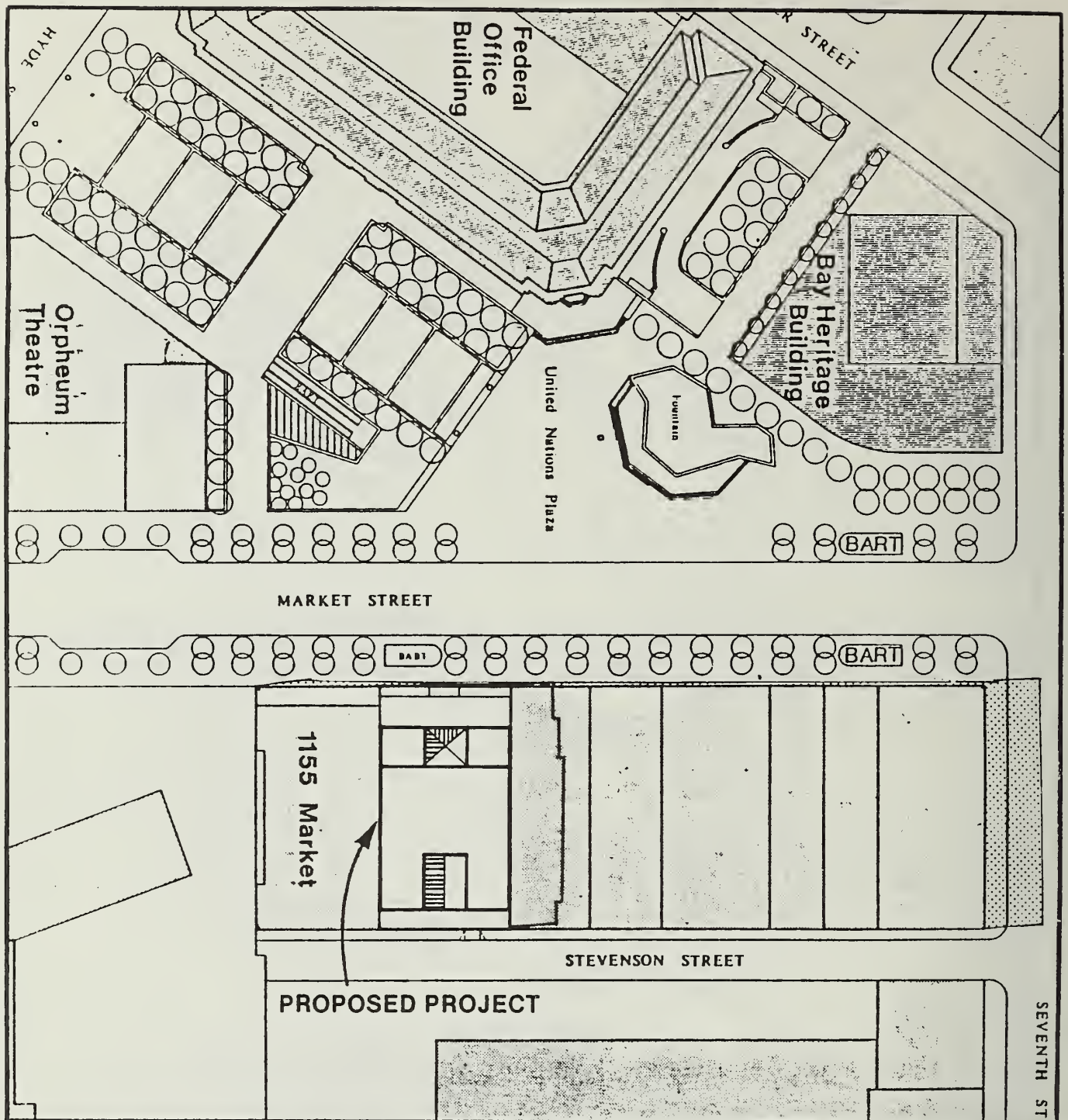
JUNE 21

TIME

12 NOON PDT

FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 11



EXISTING SHADOWS



SHADOWS ADDED BY
ALTERNATIVE FIVE

DATE

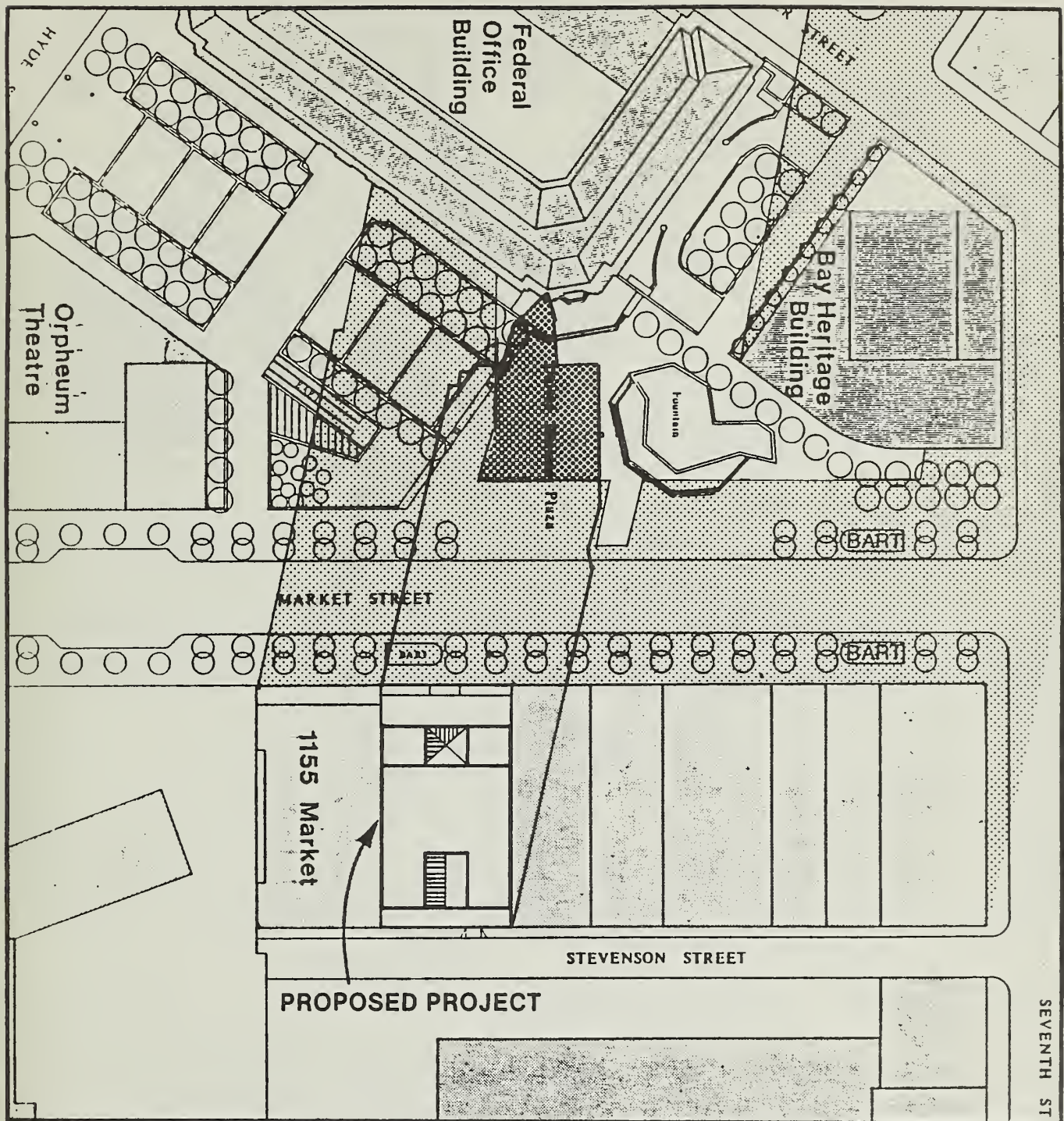
JUNE 21

TIME

2:00 PM PDT

FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 12



EXISTING SHADOWS



SHADOWS ADDED BY
ALTERNATIVE FIVE

DATE

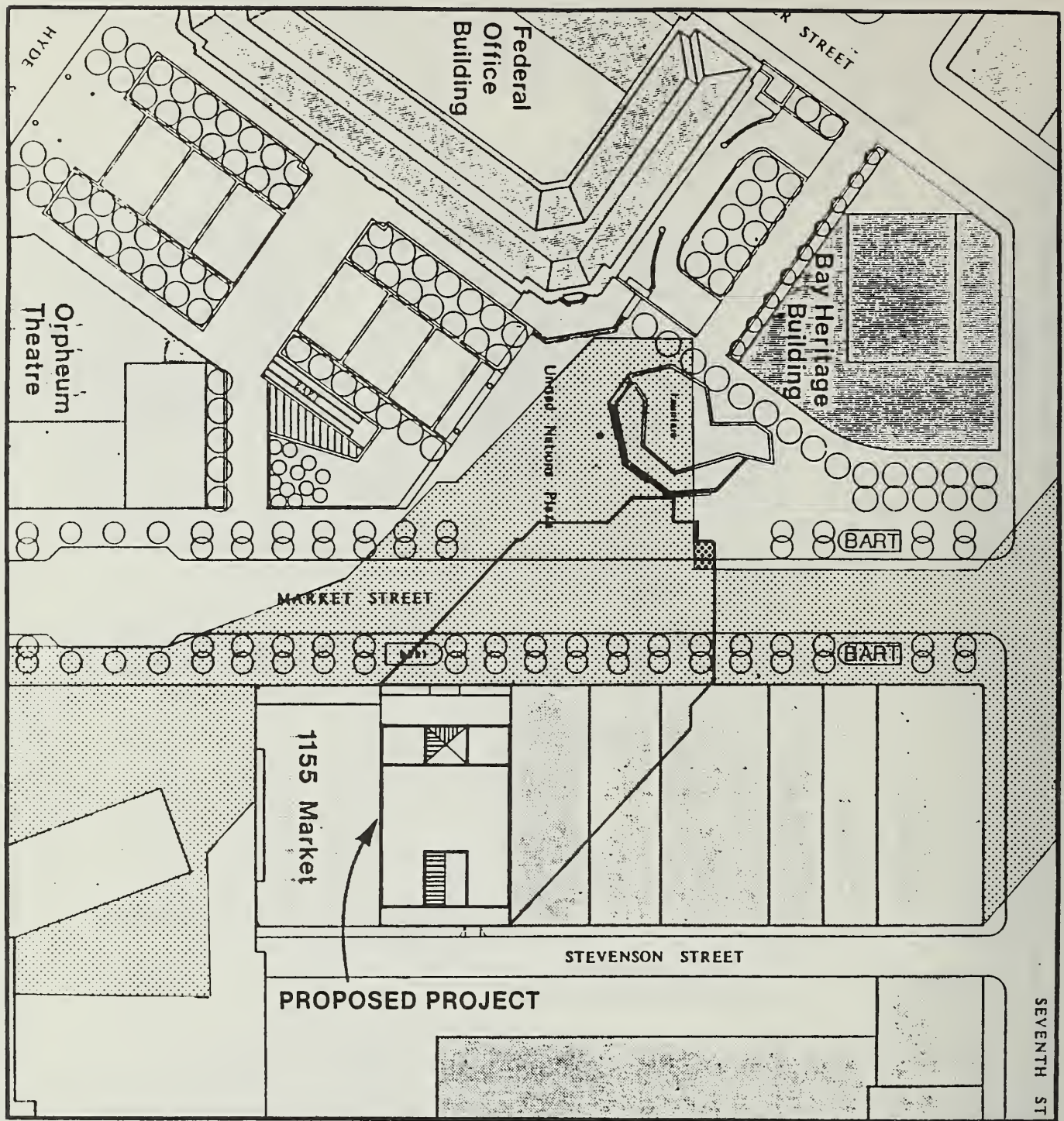
TIME

DECEMBER 21

10:00 AM PST

FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 13



EXISTING SHADOWS



SHADOWS ADDED BY
ALTERNATIVE FIVE

DATE

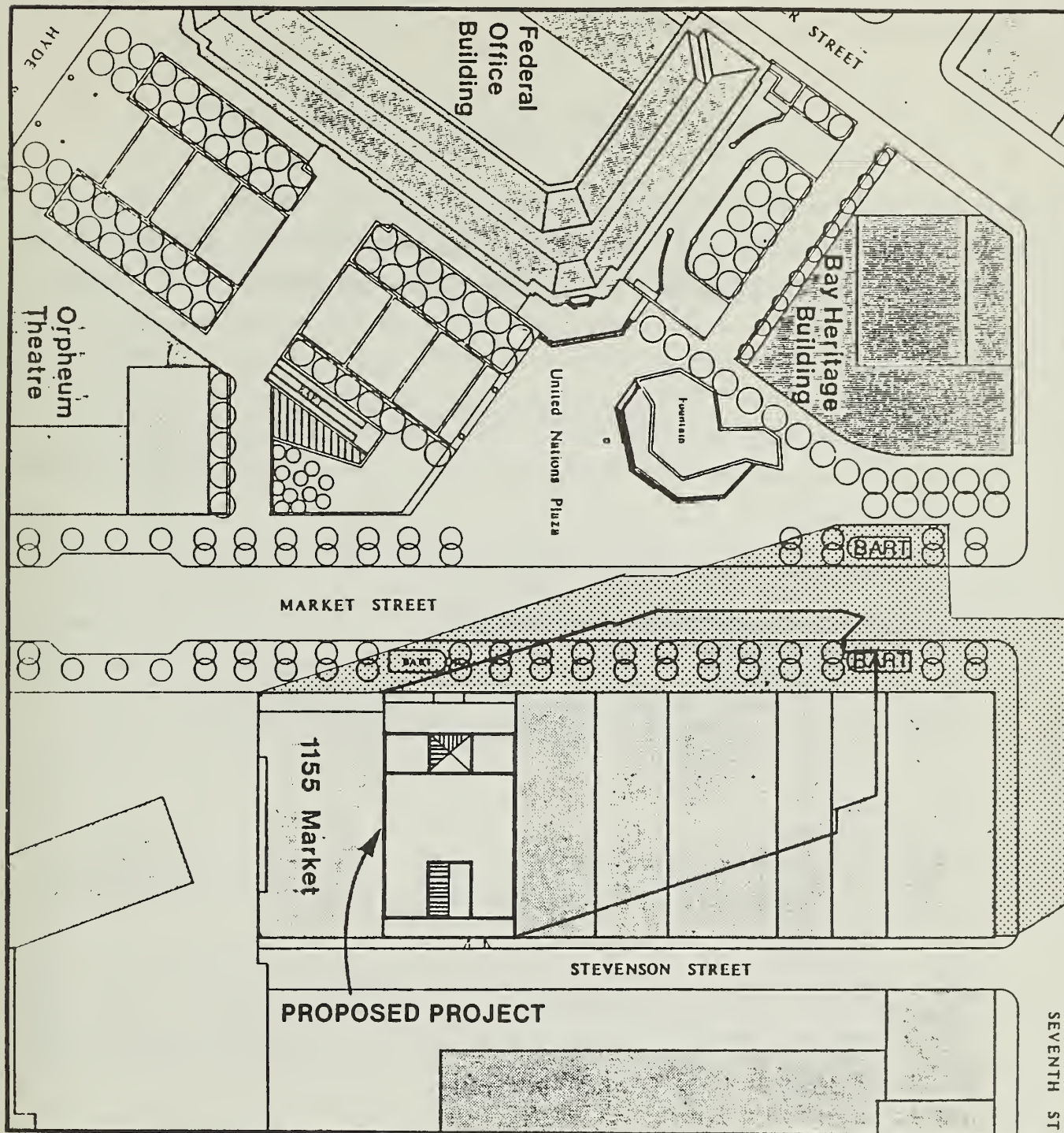
TIME

DECEMBER 21

12 NOON PST

FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 14



EXISTING SHADOWS



SHADOWS ADDED BY
ALTERNATIVE FIVE

DATE

DECEMBER 21

TIME

2:00 PM PST

FEET 0 50 100 200



● IX. SUMMARY OF COMMENTS AND RESPONSES

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* A Modification to the Air Quality Analysis of the Draft Supplemental Environmental Impact Report was published June 20, 1986, and replaces the Air Quality Impacts section of the Draft SEIR. See pages 274-299 for further details.

I. INTRODUCTION

This document contains summaries of the public comments received on the Draft Supplemental EIR (DSEIR) prepared for the 1145 Market Street Office Building project, and responses to those comments. Also included are staff-initiated text changes and errata.

All substantive spoken comments made at a public hearing before the City Planning Commission on September 12, 1985, and all written comments received during the DSEIR public review period from August 9, 1985 through September 12, 1985, are presented herein by direct quotation, edited to delete repetitive and nonsubstantive material only.

Comments and responses are grouped by subject matter and arranged by topics corresponding to the Table of Contents in the DSEIR. Each group of comments is followed by its set of responses; the order of the responses under each topic follows the order of the comments. As the subject matter of one topic may overlap that of other topics, the reader must occasionally refer to more than one group of comments and responses to review all information on a given subject. Where this occurs, cross references are provided.

Some comments do not pertain to physical environmental issues, but responses are included to provide additional information for use by decision makers.

These comments and responses will be incorporated into the Final Supplemental EIR as a new chapter. Revisions resulting from comments and responses will be incorporated into the Final Supplemental EIR, as indicated in the responses.

II. LIST OF COMMENTERS

A. PERSONS COMMENTING AT THE PUBLIC HEARING, SEPTEMBER 12, 1985

Georgia Brittan

Bradford Paul

Sue Hestor

Commissioner Susan Bierman

B. PERSONS COMMENTING IN WRITING

San Franciscans for Reasonable Growth
870 Market Street, Room 1119
San Francisco, CA 94102

State of California
Department of Transportation - District 4
150 Oak Street
San Francisco, CA 94102

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

III. SUMMARY OF COMMENTS AND RESPONSES

A. CUMULATIVE IMPACT ANALYSIS

1. Absorption

COMMENT

"N. THE ABSORPTION CONCEPT IS JUST THAT -- A CONCEPT

"SFRG summarizes its position on the invalidity of the cumulative impacts analyses in this SEIR with the following graphic. The first line represents the time on which the projects on the cumulative list will be constructed. It ends at 1995, with construction leveling off (completed) between 1990 and 1991. The two broken lines show possible absorption scenarios. Since there is no record on the City's assumptions, it is impossible to accurately construct this line. What it does show is that there will be some impacts at every point between 1984 and 1995, with all impacts being felt by 1995. The fourth line is the line of analysis in the SEIR. No impacts are felt, no impacts are analyzed until the year 2000. For that year 100% of the impacts are analyzed. As is noted above, that line also presumes that no additional space, beyond that analyzed in these SEIR, will be felt by 2000. Such an assumption is unwarranted.

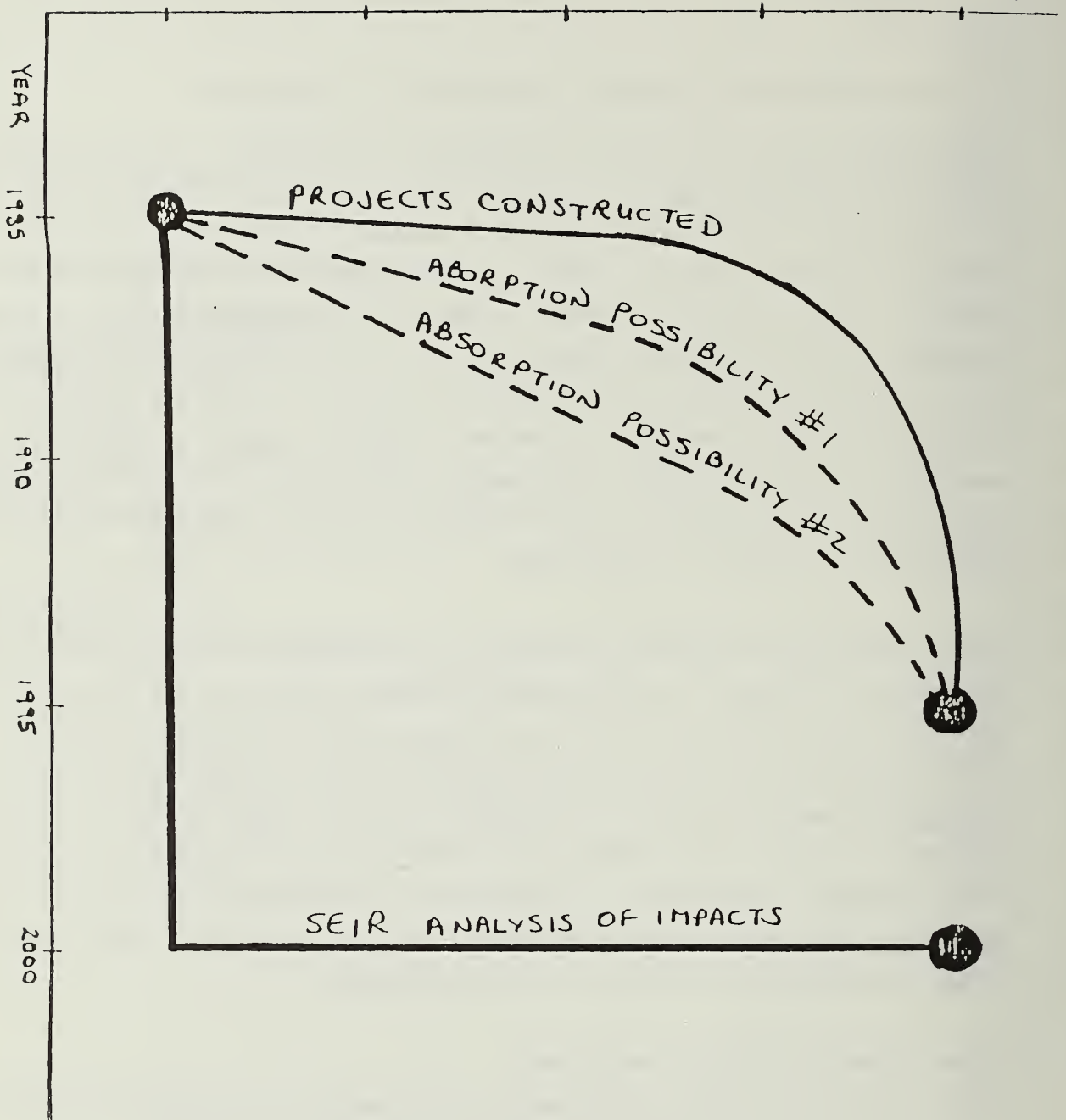
"Please explain what data the Department of City Planning has to back up the claims of the absorption concept. What studies have been done to show how the office market will work over the next 15 years and how have these studies been used in this SEIR? If the City is going to base the environmental impacts of office projects on this concept then hard data is needed to show how absorption works. Please include a definition of absorption as well. Please clarify the role that rents play in absorption. SFRG cannot find a definition of absorption in the SEIR nor in the Downtown Plan EIR. SFRG has included recent articles which show rents in office development in San Francisco are falling. How does this effect [sic] the rate of absorption?

"Please explain the following discrepancy:

"Page 40 the 201 Spear Street SEIR and the 1145 Market Street SEIR compares the DTP EIR space (all uses) to the Cumulative List space (retail and office only).

DTP EIR: 21.7 Million Square Feet

Cumulative List - March 22, 1985: 21.8 Million Square Feet



DTP EIR Office Space to Be Absorbed by 2000 (DTP EIR IV.B.34): 16.8 Million Square Feet

Cumulative List Office Space to Be Absorbed by Mid-1990's (SEIR p. 38): 20.4 Million Square Feet

DTP EIR Office Space to be Absorbed between 1984 - 1990 (DTP EIR IV.B.24 - 25): 9.8 Million Square Feet

DTP EIR Office Space to be Absorbed between 1990 - 2000: 7 Million Square Feet*

Cumulative List Office Space Absorbed between 1990 - mid-1990's: 10.6 Million Square Feet.*

*(the last two amounts were obtained by subtracting the 9.8 million that the DTP EIR specifically mentions for this period from the total. The DTP EIR does not appear to make any specific projection of absorption in the text of the EIR for 1990 -2000." (San Franciscans for Reasonable Growth)"

Office renters enjoy high vacancy rates

—From Page A1

vacancy rates, Oakland and their suburbs.

• Office rents will be lowered everywhere.

• Developers will be less able to exert pressure to construct in overbuilt areas, as fewer office complexes will be approved.

• Public officials will be able to wield greater bargaining power in hitting down office projects.

• Public and private interests will air overbuilding, whether in the city's concrete canyons or on the outskirts of Alameda County.

• The job outlook will improve, if business employers arrive on business in work areas.

• On the other hand, there will be increased threats of a recession, possibly dampening demand.

Real estate broker Kenneth Spence estimates that office rents are 25 percent to 40 percent below estimates of a year ago.

Spence, a partner in the Bohannon Group, reports that on a 10-year lease today's tenants, a landlord may offer such concessions as 15 to 18 months free rent and "above standard" allowances to a tenant with a good credit rating. He may even "close deal" to pay for part of such incentives as market floors, Spence notes.

Bill Cumbach, office building specialist at Coldwell Banker, suggests the rates must have threatened economic conditions for developers and landlords.

"Vacancy rates in San Francisco may be heading up to 10 percent next year," he predicts.

Jim Moore, manager of Cushman Wakefield here, goes a step further, noting that downtown San Francisco vacancies are headed toward 10 percent — what some real estate people call the "panic" level — in three years.

The reason? A mass exodus of jobs to suburban locations. "By early next year we're expecting a mass movement by the telephone company, the Bank of America and Chevron to suburbs" where rents are cheaper, Cumbach notes.

With the departure of thousands of employees for new office parks like those in East Bay suburbs, Cumbach estimates that 1.5 million to 2 million square feet of San Francisco office will be emptied.

Cumbach calculates San Francisco downtown vacancies at 2.8 million square feet out of a total of 27.5 million square feet of non-government, non-owner-occupied buildings. For comparison, downtown Los Angeles has about 20 million square feet of office space.

Golden, almost accounted by departing corporate employees, Cumbach does greater increases in city vacancies coming as buildings under construction are completed. He estimates about 5.2 million square feet — the equivalent of about 17 average skyscrapers — of new office space will be completed in San Francisco by 1987.

Skyscrapers under construction in the City include, he says, two extra-large structures, one at 345 California, another at 333 Bush St.; 388 Market St.; at 220 New Montgomery St.; at 456 Montgomery St.; at 77 Stevenson St.; at 700 Battery and at 88 Kearny (the San Francisco Federal Savings and Loan tower).

With city landlords facing the problem of filling vast unrented space, Cumbach foresees them dropping rents to suburban levels to remain competitive.

As corporations grab space in the suburbs, out-of-town rents are rising to city levels.

Samuel notes today, Cumbach notes: First-class space in the Financial District is running between \$25 and \$34 per square foot per year; between \$22 and \$28 in older, renovated structures. In left space, dubbed "tertiary space" by real estate people, rents run between \$15 and \$20.

Comparing San Francisco with Walnut Creek and downtown San Jose, Cumbach sees differences stemming in the previous category.

Walnut Creek's are now averaging around \$20 per square foot as are San Jose's, he says.

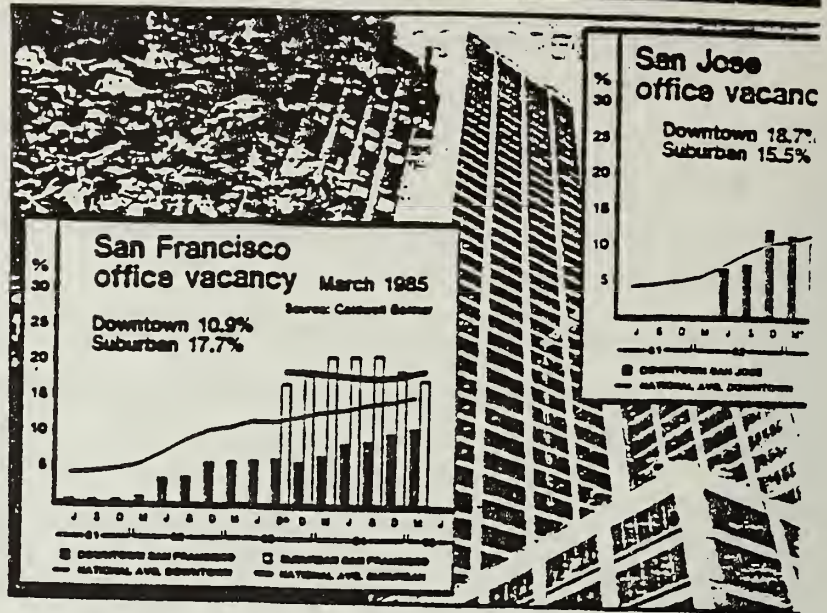
Oakland premium rents are averaging about \$25 per square foot, according to Jim Moore, office manager for Cushman Wakefield here.

In Concord, the level is about \$24, in Pleasanton about \$20, Cumbach estimates.

High as local vacancy rates are, they are slight, Cumbach notes, by comparison with those of Houston (18.5 percent in town; 20 percent in suburbs) or Denver (24.7 percent downtown; 24.1 percent in suburbs).

In Houston, Cumbach estimates, about 31 million square feet of office are empty in new downtown buildings.

San Francisco Planning Director Dean Moore says such percentages as high as those in Houston and Denver constitute "a depressed market. People regard them as unhealthy." He observed that from a business standpoint, "it takes years for a city to overcome the 'out of image'."



A renters' market for S.F. offices

By Gerald Adams 5/20/85

Examiner urban planning writer

Nearly 3 million square feet of office space is going begging for tenants in San Francisco, a record level that planners predict may double in the next three years as more high-rises are built downtown.

To lure tenants into empty offices, commercial landlords are offering free rent for up to a year and a half, free carpeting, drapes and partitions, and even marble floors.

Throughout the Bay Area, a glut of office space has pushed rents to levels 5 percent to 20 percent below those of a year ago, and as much as 25 percent to 40 percent below predicted levels.

Office vacancy rates have hit decade-high records, according to Coldwell Banker: 10.9 percent in downtown San Francisco; 18 percent in Oakland; 18.7 percent in downtown San Jose; 17.7 percent in Marin and San Mateo counties; and 22.7 percent in the Alameda-Contra Costa County suburbs.

A high vacancy rate means:

• Fewer office complexes will start construction in San

— See Page A10, col. 1

San Francisco leasing appears headed for record year

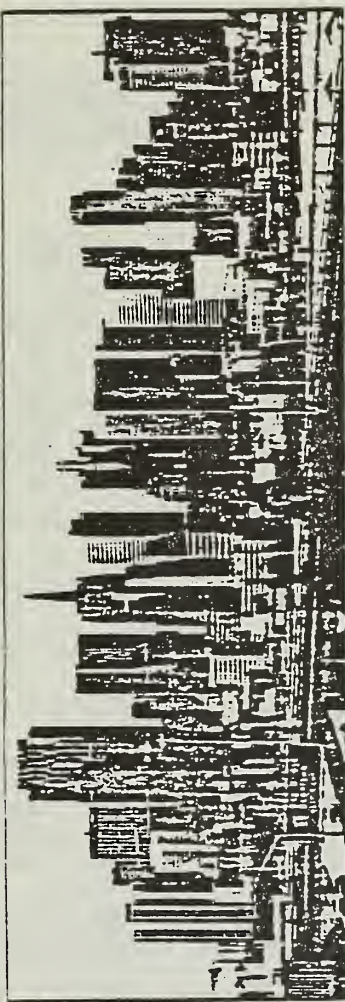
Continued from page 1

factoring. Many of the moves involve an existing tenant moving from one space to another, leaving the previous location vacant. "It's not growth in and of itself, it's a reconfiguration," says David Cummings, marketing director at Lincoln Property Co., who welcomes the wave of activity.

Net absorption is still low, adds Jim Moore, senior vice president and branch manager with Cushman & Wakefield. In fact, the net effect is a break even situation, says Kenneth Sproul, a partner in The Rubicon Group, a San Francisco real estate brokerage firm.

Although the high level of leasing activity is good news for tenants and commercial brokers, apparently landlords aren't yet feeling any relief.

Several large employers are just beginning their moves out of the city, leaving substantial amounts of space behind to sublease, while office construction continues at a fast pace. The Rubicon Group estimates that nearly 9 million square feet of office space is vacant or will be vacated or built within the next 18 months.



Office leasing in San Francisco is on target for record year

Observers are noting intense competition among landlords to attract prime tenants, many of whom are being offered above-standard improvement allowances, free rent or other concessions.

The actual size of the office space surplus is tricky to gauge. Estimates on vacancy rates vary dramatically. The Building Owners and

"Our parent company was in dramatic slither shock throughout the process," Ruck says. "Our vice president came out here and just shook his head. This is an expensive town to do business in."

The leasing activity means money in the bank for the city's commercial brokers. According to Kenneth Sproul of The Rubicon Group, two million square feet of office space may mean \$10 million to \$12 million in commissions, spread among an estimated 250 commercial brokers.

"Most firms are quite busy," Sproul says. "There's a lot of activity out there."

That doesn't mean that everyone is profiting, however. The number of commercial brokers in the city has risen markedly in the past five years. Gilbert estimates there are 220 leasing agents in the city now, compared with about 160 in 1981. Many were attracted to the San Francisco real estate industry by the overheated market in the late 1970s and early 1980s.

In fact, the competition has recently become so tough that some brokers may be leaving the business. "Whether there will be this many (brokers) four years from now is an interesting speculation," Moore says.

"This is separating the men from the boys," says William Cumbelick, a senior leasing specialist with Childwell Banker. "The transactions are harder and the money is harder to make."

Despite the competition, Cumbelick says, the prospects for brokers — and tenants — are better in today's market than they are for landlords.

Office leasing showing dramatic surge

WEEK OF AUGUST 19, 1985 • 75 CENTS

enced," Gilbert says. "Tenants recognize the enormous opportunity a market like this represents for them."

She says this higher than normal tenant interest translates into high leasing activity. "Everybody's making leases and lots of them," she explains. "There's a kind of momentum that gets started."

In the years since 1979, net absorption in the city has averaged 1.4 to 1.6 million square feet a year. Market activity was easier to measure from 1979 to 1981 because vacancy rates were so low and in 1982 because few deals were made.

According to Gilbert's figures, approximately 1.8 million square feet have already been leased in San Francisco this year. Some of the larger transactions include 151,000

square feet to the California Department of Transportation at 3333 California St., 40,000 square feet to Xerox Corp. at 201 Spear St., 60,000 square feet to accounting firm Arthur Young at One Sansome St. and 41,000 square feet to the Internal Revenue Service at Van Ness Plaza.

These transactions, although dwarfed by the mammoth deals that took place in 1979, 1980 and 1981, still add up to a hefty total. Gilbert cautions that her figures may not be complete or absolutely accurate because full details on private transactions are often unavailable.

Gilbert and other industry observers are quick to point out that high leasing activity doesn't mean that total market absorption is

please see page 10

By Kristin E. Downey

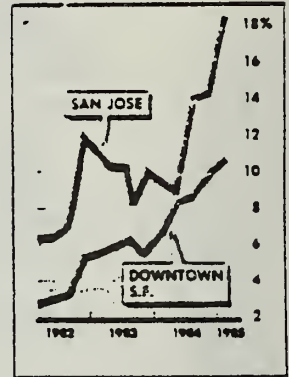
San Francisco appears headed for a record-breaking year in office leasing, according to Carol Gilbert, vice president of Rubloff Commercial Brokerage.

Gilbert, who has studied the city leasing market since 1971, reports that at least 2 million square feet of office space have been leased in the city within the past seven months.

And she sees no end to the boom. San Francisco tenants are also apparently scrambling to take advantage of the plentiful supply of office space and good terms available.

"1985 is probably the most active leasing market San Francisco has ever experi-

OFFICE VACANCY RATES CLIMB



Good News For Office Renters in S.F.

By Stephen Maltz

Office vacancies in downtown San Francisco have hit a 10-year high, prompting landlords to offer free rent, trips to Hawaii and other incentives to lure tenants.

Nearly 3 million square feet of downtown office space went wanting in March as the vacancy rate reached 10.6 percent, up from 6.9 percent a year ago, a new report by Coldwell Banker says.

Experts say the high vacancy rate is symptomatic of a glut of office space throughout the Bay Area and the nation, which has depressed rents by as much as 20 percent.

"The whole San Francisco office market is continuing to soften," said Clark Osterhout, regional manager for Charter Commercial Brokerage Co. "It's simply a matter of supply exceeding demand."

Although some San Francisco brokers expressed concern over the vacancy rate and scattered reports that it could continue to rise, others take consolation in even higher rates elsewhere.

"I don't see it as a panic situation at all," said Jim Moore, San Francisco branch manager of Cushman & Wakefield, a commercial brokerage. "Our vacancy rate is not a particular problem when you look at other cities."

Coldwell Banker found a 24.7 percent vacancy rate in downtown Denver, 21.7 percent in San Diego, 21.7 percent in Phoenix, 19.5 percent in Houston and 17.3 percent in Dallas.

After years when virtually no offices were available in San Francisco's downtown area, the vacancy

Good News for Renters of Offices in S.F.

Figure 2 (page 2)
rate started creeping up in 1982 as institutional and foreign investors pumped capital into office construction.

At the same time, high renter-fied companies such as Chevron and Bank of America to shift some of their operations outside the city to less expensive areas, such as Contra Costa County.

(Compounding the problem, developers have been rearing to start office projects in recent years because of a fear that San Francisco may soon tighten building restrictions, such as adding new height limits.

Five huge projects totaling

nearly 2 million square feet of office space are scheduled to be completed in the next year to 18 months, Moore said.

They are 315 California St. with 570,000 square feet, 313 Bush St. with 123,000 square feet, 1300, 605 Montgomery St. (300,000) and 800 Market St. (225,000).

Vacancy rates are reaching record levels throughout the Bay Area and nation, including an 18.7 percent rate in downtown San Jose, 16 percent in Oakland, 20.3 percent in Sacramento and a 15.3 percent national average.

The surplus has dropped prices in San Francisco by up to \$4 a

square foot a year to the \$27.93 range, said Bill McCubbin, vice president and district manager for Thrulin & Fink.

McCubbin said the drop has "narrowed the gap" between San Francisco rents and the East Bay suburbs, although rates still run at \$20 or under in many suburbs.

Heckles the initial effect on rents, experts say the glut could mean fewer office buildings will be proposed, financed and built.

For now, the market has simply forced developers to use their will to move office space. That means discounting rents and paying tenants thousands of dollars in cash to relocate.

"In one case, a Fortune 500 company that signed for 85,000 square feet was given over a year's free rent plus tenant improvements," said Gregory M. Ballou, vice president and regional manager of Coldwell Banker.

"That's really stupid, but at most everyone is cutting their rates and offering at least two or three months free rent for smaller tenants and up to six months for large ones."

(Strictly said free trips to the wall aren't uncommon for long-term tenants, and one developer held a drawing for a trip to Europe to attract commercial brokers representing large companies.

City fares well in office vacancy studies

In 1978 the amount of new office space added in the U.S. was 104 million square feet. In 1981 that figure had soared to a record-shattering 325 million.

The office space building binge, although declining in 1982-83, pushed the construction curve even higher last year as an additional 200 million square feet came on line.

As one of the top 20 major office markets in the nation, San Francisco has followed this national cycle, and yet amid this spiraling construction trend, it still had one of the most enviable occupancy rates in the nation during 1984.

According to a recently released study of office markets in 1984 in the central business districts of 20 major metropolitan areas, only four cities nationwide had better vacancy rates than San Francisco.

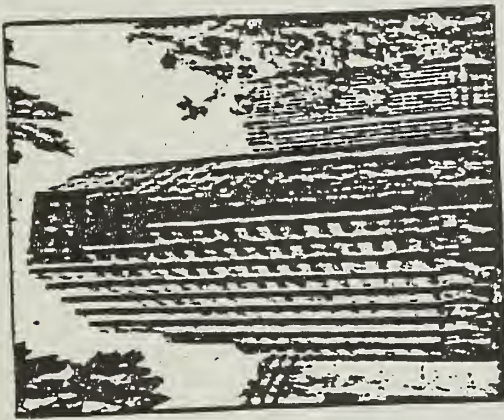
The report shows New York had a vacancy median of 7 percent, tied with Detroit. Philadelphia at 6 percent, Tampa at 5 percent and San Francisco at 10 percent. (More recent 1985 data shows San Francisco at 10.9 percent.)

The worst vacancy rate in the nation in 1984? Denver, Colorado — 24 percent.

In the jargon of commercial developers, the vacancy rate figures are basic to further data concerning space and time — the sponge of absorption.

The time span, or absorption period, needed to fill a certain amount of vacant office space gets detailed scrutiny each quarter.

Among the key findings of the study, run quarterly by the National Management Advisory



Within 18 months of opening, Lincoln Properties' 100 Spear Street highrise in the South of Market is 86 percent leased.

Services of Kenneth Laventhal and Company, were those concerning San Francisco:

In 1984 the time required to lease available office space at the City's annual absorption rate of 1.5 million square feet was a median period of 20 months.

By comparison, New York (the national leader) had an absorption rate of 5 million

square feet and required a period of 33.5 months to fill.

In the report's overall rating, Philadelphia's vacancy rate in 1984 was 9 percent, balanced against an absorption rate of 1,750,000 square feet in a time period of 16 months.

In the midst of increasing office space construction and against a backdrop of so many variable factors in office leasing, developers apply many strategies to decrease the time span of absorption.

For example, the Lincoln Property Company made its initial foray into the San Francisco market last year with its flagship project, the 100 Spear Street building, a 21-story structure South of Market.

It opened in January 1984 with approximately 10 percent of the 200,000 square feet pre-leased.

Within 18 months of the building's completion, Lincoln Property Company had leased 90 percent of the space, a significant track record in office leasing in the competitive San Francisco market.

Lincoln Property Company's David Cunningham points directly to one primary factor in the 100 Spear Street success. He said, "Working well with the brokerage community was our highest priority."

This same priority continues for Lincoln Property Company in its other San Francisco developments at the 10-story 33 New Montgomery Tower, a 10-story office building at 222 Kearny, as well as projects at 455 Market and 300 Beale Street.

Although a continuing healthy relationship between developers and the brokerage community is essential in the space market, vacancy cycle, the demand for space, quality of development and the influence of tenants on lease agreements are strong currents in the flow of office space leasing efforts.

In a recent overview of the San Francisco office market for 1985, Norman A. Spence, associate vice president of Coldwell Banker Commercial Real Estate Services, said, "I believe we will continue to have a relatively soft market for office space in the next 12 to 24 months, and tenants will be able to strongly influence the economics of the lease transaction."

In light of this current sophistication of today's tenants, the significance of developer-broker relationships increases in importance to further reduce the office leasing absorption time in San Francisco.

Report lists The City as hot commercial real estate market

Briggs Howard News Service
WASHINGTON — A new report says six of the 10 hottest commercial real estate markets in the country are in the West and three others are south of the Mason Dixon Line.

The only Northern city in the top 10 is Boston, according to Edward Dale, a senior vice president of Coldwell Banker, the nation's largest commercial real estate company.

Dale told a meeting of real estate brokers and business leaders here Thursday that he considers Boston, Atlanta, Tampa, Dallas, Denver, Phoenix, San Jose, San Diego, San Francisco and Washington the hottest markets, followed closely by Chicago, Seattle and Portland, Ore.

If "vibrancy and potential" were the standard, he said, New York and Pittsburgh would have to be added to the list.

the real estate industry is ready to "shake" the pattern of three good years and two bad ones. "The good times could last 10 to 15 years," he said.

His report was surprisingly upbeat in view of the high office vacancy rates in Houston, Denver, Dallas, Phoenix and many other metropolitan areas. But he argued that growing cities like Denver are able to absorb office space at an extremely rapid

rate.

"Atlanta and New York had those same problems in 1973," he said, "and Phoenix, San Diego and Tampa have the same overbuilt but absorbable situations today."

Dale noted that high vacancy rates have not done much to discourage new office projects.

"Office buildings are the premier trophy investment product today, and demand for them has never been stronger," he said. "Consequently, developers are building and planning many new projects in most of those cities, and just 30 and 40 will see enormous increases in supply."

office land in New York City is selling for \$2,600 a square foot, followed by Toronto and San Francisco at \$1,000 a square foot, Los Angeles at \$800 a square foot and Chicago at \$600 a square foot.

"Midtown New York office rents are now the highest in the world, replacing London and Tokyo at the top of the list," he said.

Industrial land, usually found in the suburbs, has gone up nearly 100 percent in the past 10 years in San Diego and San Jose, 60 percent in Orange County, south of Los Angeles and 60 percent in the Portland, Ore. and Fort Lauderdale areas of Florida.

Among high-technology cities, San Jose is "without question" No. 1 in commercial real estate activity, according to Dale's report, but Colorado Springs, Oklahoma City, Austin, Texas, Sacramento and Portland, Ore., are not far behind. Colorado Springs and Austin have sold more than 1,000 acres to high-tech companies over the past four years, he said.

His report shows that developers

In a companion report, Coldwell Banker predicts that new housing starts and existing home sales will dip only slightly from their 1984 levels. The highest priced major cities are San Francisco, where the average house cost \$153,000, and Washington and New York, where the average was about \$130,000 last year.

Office Rents Fall, Vacancies Jump In Downtown S.F.

By Harre W. Demoro

Office building rents have plummeted by 5 to 10 percent and a record 9 percent of downtown San Francisco office space is empty, Coldwell Banker Real Estate Services reported yesterday.

Although the situation probably won't improve for 18 months, it may lure companies to San Francisco that were scared away by the city's image as one of the most expensive in the country, said William J. Cumbelich of Coldwell Banker.

He blamed the trend on the rapid exodus of big companies to central Contra Costa County, the simultaneous completion of six large buildings in San Francisco that are currently competing for tenants, and a slowdown in the expansion of firms staying in the city that won't need more space.

The San Francisco-based companies shifting thousands of employees to Concord and San Ramon include Bank of America, Pacific Bell, Wells Fargo Bank and Chevron.

The new downtown buildings now seeking tenants or that are to be completed within a year include: the Citicorp highrise at Sansome and Market Streets, Bank of Canton at 555 Montgomery Street, 160 Spear Street, 458 Montgomery Street, 580 California Street, 655 Montgomery Street, 100 Spear Street, 201 Spear Street, 750 Battery Street, 345 California Street and the San Francisco Federal building at Kearny and Post streets.

The vacancy figure is the highest since Coldwell Banker began keeping the figure in 1978. From 1978-79, less than 2 percent of downtown space was empty. In 1980-81, the vacancy rate was less than 1 percent, the real estate firm said.

As the economy cooled off and several big buildings were finished, the rate rose to 4 percent in the second quarter of 1982 and to 8.8 percent in June 1984, according to Coldwell Banker.

Because of the surplus of space, premium space is leasing for \$27-\$38 a square foot annually and secondary buildings are renting for \$18-\$24 a square foot, 5 percent to 10 percent lower than a year ago, according to Cumbelich.

The high vacancy rate and declining rents should help San Francisco, he said. Firms scared off by high rents and a lack of space will consider the city. Companies already here but fearful of escalating rents will decide to stay, according to Cumbelich.

However, the restrictions the city plans to impose on downtown office building construction could slow construction so that space will be scarce again in about two years, driving rents back up, he said.

A Shadowy Market

6/11/84 SF Chronicle

Office-Space Bargains Abound

By Harre W. Demaro

Just when it appeared the downtown office market might shrink because new city controls allow landlords to boost rents rapidly, a real estate brokerage firm has compiled a list of little-known San Francisco space available at bargain rates.

According to a survey by Charter Commercial Brokerage Co., more than 475,000 square feet of sublease space, or 1.67 percent of the 28.5 million square feet in the inventory, is available below the usual rates in 188 buildings in the Financial District on both sides of Market Street.

That is as much space as in one high-rise tower in Embarcadero Center.

Real estate surveys often miss or ignore sublease space because it may be offered informally by a tenant who has moved out but is still paying rent and eager to make a quick deal, even at a loss.

"It is a shadowy, secondary market," said Bruce O. Carter, president of San Francisco-based Charter.

Of the 42.7 million square feet of office space in the entire city, 5.8 million square feet, or 13.57 percent, is vacant. About 698,500 square feet, or 1.64 percent of the total, is vacant sublease space, according to the Charter survey.

These numbers differ from the 7 percent downtown office vacancy rate that is generally accepted by major real estate brokers because the Charter study includes many more buildings than the other lists.

The sublease rent often is low because the former tenant took the space when rates were lower some years ago.

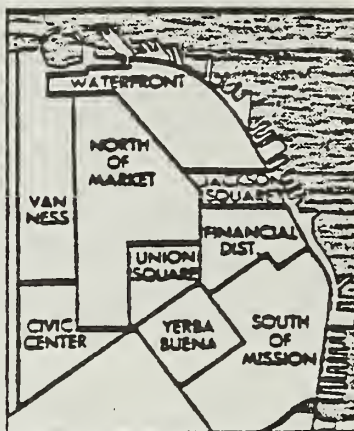
Another reason rates are low is because the space already has been improved and a tenant would have to adapt to designs already in place.

"You have a piece of space and that's it. You don't have flexibility," said Clark N. Osterhout, Charter regional manager.

In many cases, subleasing prices cannot be easily documented because of the way the arrangements are structured.

Landlords usually don't like subleasing because the original tenant can sublease the space at a higher price than he or she is paying the building owner. However, some of the newer original leases

MISSING OFFICE SPACE



Following is San Francisco's office vacancy rate by area and type of lease as of April 15, 1984:

	Direct - lease	Sub- lease	All - vacant
Financial District	8.93%	1.67%	10.62%
South of Mission	28.07	1.21	29.28
Civic Center	8.74	1.03	9.77
Jackson Square	19.84	2.31	22.15
Waterfront/ N. Beach	19.59	0.25	19.84
Union Square	14.09	3.10	17.19
Yerba Buena	16.78	2.09	18.88
Van Ness	10.73	—	10.73
North of Market	6.51	1.17	7.68
TOTAL	11.94	1.64	13.57

Source: Charter Commercial Brokerage Co.

contain clauses that allow the landlord to share in profits from a sublease.

Some of the most prestigious addresses have vast amounts of vacant sublease space. Often this can be rented at 10 percent below the amount a landlord is getting for other space in the same building, Osterhout said.

Embarcadero Center 2 has often been cited as a classic example of the shadow market because significant amounts of space were subleased when Levi Strauss & Co. moved to its new Levi's Plaza headquarters before the old lease expired.

On the other hand, some prestige buildings, such as the Transamerica Pyra-

mid and the Bank of America headquarters, almost never have vacant space of any kind and rarely, if ever, are on a sublease list, according to Osterhout.

Here are some other sublease examples from Charter:

■ United States Leasing International is moving July 1 from 45,000 square feet at 633 Battery Street into 110,000 square feet at 220 Pacific Avenue. Space in the Battery Street building is usually available on a direct lease from the landlord in the \$22 to \$24 per square foot range annually. But U.S. Leasing will sublet it at \$18 per square foot until September 30, 1988, and there is an option to renew at market rates.

■ Almost 10 percent, or 125,000 square feet, of the 1.3-million-square-foot 101 California Street, the glassy building completed recently by Texas developer Gerald Hines, is available on a sublease basis. The landlord is getting \$42 per square foot annually on a direct lease.

■ The 700,000-square-foot 30 California Street tower has 44,000 square feet on the sublease market.

■ About 35,000 square feet in the 220,000-square-foot 801 California Street building is available as a sublease.

■ Brokers are offering 42,425 square feet of sublease space in the 380,000-square-foot 100 Pine Street tower.

Office space represents about 10 percent to 15 percent of the cost of doing business, according to Carter.

That is not a big enough percentage to keep a company in office space that is too small or in the wrong location, he said. So a decision to move before a lease expires and to sublease what is left behind, even at a loss, is not unusual.

Sometimes the owner of a new building will lure a tenant by taking over his old space and subleasing it, Osterhout said.

An example is Equitac, which was trying to lease its big building near the Oakland-Alameda Coliseum.

"They wanted Sperry Rand to move out there," Osterhout said. "So they took over Sperry's lease obligation at Embarcadero 3 for 16 months at \$60,000 a month." Almost immediately Equitac subleased the Embarcadero space to American Telephone & Telegraph.

"The space was vacant for one month so it was a good deal for Equitac and Sperry Rand," Osterhout said.

PG&E says it may stay in City — rent's down

By Dexter Waugh
OF THE EXAMINER STAFF

Increasing vacancy rates and declining rents for office space in downtown San Francisco have caused PG&E to reconsider a move to Concord, where it had planned to build a \$100 million complex.

PG&E's reassessment is the first indication of a pause in industry's flight to the suburbs.

"I think certainly it's going to slow down now," said Bill Waterhouse, director of Concord's Redevelopment Agency, which owns half of the land where PG&E is thinking of building.

"Development is not going to be as rapid as in the past, but I think it will continue at a more stable pace."

Dick Draeger, a PG&E vice president, told the Concord City Council last night that the utility is reassessing its plans to build 1 million square feet of offices near the Concord Bay Area Rapid Transit District station.

Draeger said rents in downtown San Francisco have declined 15 percent in the last year, making them competitive with rates in Contra Costa County.

The office market in San Fran-

— Please see OFFICE A-12

OFFICE

— From A-1

clean is fairly dynamic right now," Draeger said today.

"We felt it would be prudent to take a very careful look. It's much more competitive than it was. Landlords seem more willing to offer long-term leases at reasonable rates," PG&E owns a three-building, million square-foot complex in downtown San Francisco. It rents another 450,000 square feet, Draeger said.

PG&E secured exclusive negotiating rights last January with the Concord Redevelopment Agency, which

owns half of the 6.5-acre parcel on which PG&E was considering building.

In a progress report to the Concord City Council — sitting as the Redevelopment Agency — Draeger said last night a financial study he still in the works. He said he hoped to report back in the fall.

Bill Waterhouse, Redevelopment Agency director, said the reconsideration was "not a surprise to us at all."

"Certainly, we'll have a slowdown in office development, since we've had a great rush in development in the last two years. We rather figured this was going to happen."

San Francisco's downtown office vacancy rate has been steadily in-

creasing, according to the office vacancy index compiled by commercial real estate firm Coldwell Banker. At the end of June it stood at 11.6 percent, up from 10.9 percent in March, 5.9 percent in March 1983 and 0.1 percent in March 1981.

A realty source said that vacancy rate amounts to 3.1 million square feet out of 26.5 million square feet in the competitive market. "When you have as much vacancy as we do now, there is going to be a softening of rents," he said.

He said a further increase in the vacancy rate is anticipated, mainly because there is another 4.5 million feet under construction.

Pacific Telephone and Bank of

America are also moving offices to San Ramon and Concord. Bank of America is planning to move into its new 1.1 million square foot complex in Concord.

Waterhouse said he did not know the impact of PG&E's reassessment and reconsideration.

He said he knows of no other planned projects that are being put on hold.

"I still get a steady flow of developers coming in, looking for development opportunities. But it's rather interesting that nowadays I get more developers looking either for residential housing development or retail, rather than office, which I think is healthy."

RESPONSE

The commenters present several different points, not all of which are directly related to the main question concerning absorption. The second paragraph of the comment brings up the key points related to absorption and its relevance to the cumulative impact analysis in this SEIR. These are addressed in the first four sections of this response.

In the first paragraph, however, the commenters present a chart which purports to summarize "the invalidity of the cumulative impact analyses in this SEIR". As described in the fifth section of this response, this chart says very little about absorption. The commenters conclude the discussion of this chart with separate points about the time frame of the impact analysis. The fifth section of this response also addresses the issue of how the SEIR deals with when the "impacts will be felt" and what assumptions the SEIR makes about development through the year 2000.

Finally, the last points in the comment regarding an alleged discrepancy are independent of either of the two preceding points. The commenters' use of numbers here is similar to other instances where numbers from the Downtown Plan forecasts and the March 22, 1985 List are compared inappropriately. The problems with the use of the numbers, and alternative means of comparison, are discussed in the last section of this response.

Absorption

The word "absorption" is commonly used within the context of real estate market analysis and development planning. The term refers to the process by which additional building space is leased and occupied by additional business activity and additional employment.

The background for this standard use of the word in a real estate context comes from its meaning in every day usage. Absorption describes the process of "taking in", as a sponge absorbs water. The water fills or occupies the sponge.

Planners, developers, and others interested in real estate often describe absorption in terms of the total amount of building space brought into the market, leased, and occupied during a particular time period (i.e., the amount of square feet absorbed over so many years). Absorption is also used in terms of the average annual rate of absorption over a period of years (i.e., so many square feet absorbed per year).

The newspaper articles submitted as exhibits to this comment discuss absorption. They provide examples of the concept and of the standard usage of the word. The references in these articles to absorption (without definitions or technical explanations) indicate that the use of this term within a real estate market context is generally understood and accepted by the public.

The concept of absorption and the usage of the word to describe the process by which additional building space is leased and occupied by additional business activity and additional employment can also be found in planning and real estate literature and textbooks. The following provide two examples: Property Development: Effective Decision-making in Uncertain Times, by John McMahan (see pp. 199-201 and p. 392); and Real Estate Investment Analysis and Taxation, by Paul F. Wendt and Alan R. Cerf (see pp. 193-222).

For cumulative impact analysis (with either the list-based approach or the Downtown Plan forecast approach), absorption is simply a term to describe the process by which cumulative growth occurs. The underlying premise of cumulative impact analysis is that as new buildings are built, space is added to the total supply in the market, thereby accommodating growth of business activity and employment. Cumulative impacts on housing, transportation, energy, and air quality arise from this employment growth. It is the filling or absorption of additional space by additional workers (employment growth) which is the subject of cumulative impact analysis.

The reasons why the concept of absorption is important to cumulative analysis are that additional employment (not just the construction of buildings) results in impacts on housing, transportation, energy and air quality; and that additional workers are not necessarily located in newly-constructed space. For example, it is often the case that new space is occupied by existing

businesses that move from nearby locations in older buildings. Often, tenancies change in a number of buildings (new and old). Employment growth does not occur until the space in new buildings is filled and any vacated space in older, existing buildings is also filled. (It is assumed that the terms "filled" or "occupied" include an average allowance of vacant space to allow for normal market operations.) By definition, employment growth means more total workers in a particular area, not just the occupancy of the newly built space (which can occur because of shifts in tenants from existing buildings). Thus, the concept of absorption refers to the overall total real estate market and to how and when the amount of additional space becomes fully occupied. Sometimes the term "net absorption" is used to make sure that it is clear that the concept refers to the net addition of occupied space to the total downtown (i.e. growth) not just to the occupancy of a particular building.

For some aspects of project-level impact analysis, it is appropriate to focus on the space in a new building without being concerned about how it fits into the overall real estate market. This is not an appropriate perspective for cumulative analysis, however. Cumulative impacts occur when the amount of net additional space that new projects contribute to the overall total supply of space is absorbed by employment growth. The key concept is "employment growth to absorb the net additional space". The purpose of cumulative impact analysis is to assess the implications of that growth.

This is certainly not a new concept or a new perspective on cumulative impact analysis. The use of the word "absorption" in EIRs has increased recently, however. This is in response to comments received on earlier supplemental EIRs which expressed confusion about the difference between the occupancy of space in new buildings (referring to new projects) and the occupancy of the amount of space added by new construction (referring to total growth in the downtown area). Besides explaining this difference, an effort was made to use terms which would help distinguish building occupancy from downtown-wide absorption of additional space.

Two Approaches To Cumulative Analysis

Future growth is defined differently under each of the two approaches to cumulative analysis presented in this SEIR. As explained in the SEIR, under the list-based approach, growth is defined by an amount: the additional space and employment that would exist in downtown San Francisco as a result of the construction of projects on the March 22, 1985 List. Under the Downtown Plan forecast approach, growth is defined by a particular time frame: the additional space and employment expected from 1984 through 2000. The answers to questions about how "absorption" was factored into the cumulative analysis in this SEIR vary by approach, according to the way in which growth was defined in each case.

Downtown Plan Forecast Approach

Under this approach, growth is defined as the additional space and employment expected from 1984 through the year 2000. Extensive economic surveys and analyses were done as the basis for developing forecasts of future growth for this planning horizon. Factors affecting employment growth and the demand for space were studied, as were factors affecting future development and the supply of space to accommodate employment growth. The work included detailed study of the office market and how it is expected to work over the 16-year planning period. The growth forecasts directly identify both the amount of employment growth expected from 1984 through 2000 and the amount of additional space that will be absorbed by employment growth during this period.

Under this approach, the forecasts predict the growth of the economy (measured in terms of employment) and how much space that growth will occupy. This is a forecast of absorption. In other words, the concept of absorption is inherent in the definition of growth in the forecast approach.

List-Based Approach

Under this approach to cumulative analysis, the amount of growth is defined by the additional space and employment that would result from the construction of the projects on the March 22, 1985 List. Cumulative growth is not defined to correspond to any particular year or time period.

Although time frame per se is not relevant for defining growth, it is relevant for identifying the future context for impact assessment (future context in terms of transportation systems, housing market conditions, etc.). Cumulative impact analysis assesses future conditions at the time when all of the growth (to be accommodated by development of projects on the List) would be in evidence.

Cumulative impacts on transportation, housing, etc. arise from the growth of employment. Additional workers and their behavioral patterns (not the construction of space per se) lead to impacts. Thus, the estimates of time frame for the list-based cumulative analysis were based on employment growth.

The time frame for the cumulative analysis using the list-based approach was determined by comparing the amount of employment growth that would be accommodated downtown in the amount of additional space on the List to employment forecasts. These forecasts provide a perspective on overall downtown growth based on analysis of the many factors and trends influencing economic activity and the demand for additional downtown space. This approach was used to provide an indication of when the additional amount of space on the List would be absorbed by employment growth. Thus, the concept of absorption was factored into the list-based approach insofar as was necessary to develop a general time frame for the impact assessment.

The commenters specifically ask for data to support the estimates of time frame under the list-based approach. This explanation is provided in the next section.

Time Frame for Impact Analysis Under List-Based Approach

To provide an overall growth perspective, there are two economic studies that have developed forecasts of economic growth in downtown San Francisco. They are the only two studies that have recently analyzed downtown employment growth and which provide forecasts of future employment. One is the analysis prepared to forecast growth under the Downtown Plan and other policy alternatives for the C-3 District of San Francisco. The other is the regional economic study and forecasts prepared by the Association of Bay

Area Governments (ABAG). Comparisons were done using each of these analyses and forecasts, to ascertain an approximate time frame for growth under the list-based approach. The next two sub-sections provide background on the two economic studies and forecasts and each comparison. A third sub-section explains how these comparisons were used for the list-based impact assessment in this SEIR.

Downtown Plan Forecast

The economic study done to develop the Downtown Plan forecasts is one of the most comprehensive efforts ever undertaken for local policy analysis and planning purposes. It was a large costly study effort that extended over several years. The primary purpose of the study was to analyze and forecast employment growth and building development through the year 2000 under the Downtown Plan and alternative C-3 District zoning policies. (Simple extrapolations of historic trends or current conditions were not adequate since the policy options under evaluation represented changes from past policies.)

Analysis of the downtown office market was a major part of this effort. In fact, this study included a survey of businesses and other analyses specifically designed to identify and analyze the downtown office sector. Without special study of this type, it is very difficult to focus on office activities since the standard published economic and employment data do not use categories which directly describe the activities located in office space. Included in this study was in-depth analysis of the various types of office activities (executive functions and headquarters; professional service activities; information processing, record keeping, and administrative activities; etc.) and of past and recent office market operation as well as analysis of how the office market will work in the future and how local policies and regulations would affect this market. The analyses considered all of the important local, regional, and national demand and supply factors that will have a bearing on the future of the City's office market.

Thus far, in addition to cumulative analysis in project EIRs, this economic analysis and the forecasts developed for downtown planning purposes have been used in connection with the Downtown Plan, Downtown Plan EIR, Downtown EIR Consultant's Report, the City's Office-Housing Production Program,

and the Transit Development Impact Fee. The study and forecasts provide an analytical background and overall scenarios of economic growth that can have many applications.

The economic forecasting methodology for this study is based on a conceptual framework of the process of urban economic growth and development. The analytical procedures incorporated the best available data and information on local and regional development trends and economic conditions. The wide variety of types and sources of data and information used included those describing past, current, and likely future conditions and trends regarding economic, real estate, demographic, and public-policy factors. As mentioned above, the study effort included a special survey of businesses and workers in downtown San Francisco to provide detailed information for the specific types of economic activities and development in the study area.

A description of the Downtown Plan forecasting methodology and economic study was not included in this SEIR because several descriptions have already been provided to the public in other documents. Since it was such a comprehensive effort, there is a large amount of data and information and many pages have been devoted to explaining the study and the forecasts. References are provided by the following:

The Downtown Plan EIR provides the most in-depth description of the methodology and the forecast results. Two complete sections of the Downtown Plan EIR, Section IV.B, Land Use and Real Estate Development, and Section IV.C., Business Activity and Employment are devoted to discussion of the forecasts of growth under the Downtown Plan, and these discussions are summarized in Sections I.B and I.C. (See pp. IV.B.18-IV.B.75, pp. IV.C.29-IV.C.54, pp. I.B.1-I.B.8, and pp. I.C.1-I.C.5.). Parts B and C of Section VII, Alternatives, summarize the forecasts prepared for the Plan and the five Alternatives. (See pp. VII.B.1-VII.B.14 and pp. VII.C.1-VII.C.12.) Appendices G and H describe the economic analyses and overall forecasting methodology. (See pp. G.1-G.26 and H.6-H.18.) Section B.1 of the Downtown Plan EIR Comments and Responses discusses many of the issues that have been raised about the economic forecasting methodology and results. (See particularly pp. C&R-B.1 - C&R-B.18.) Questions about the Downtown Plan forecasts and analytical methodology from these commenters were responded to in past SEIRs. (See pp. 123-136 and 143-150 of the One Sansome Building Final SEIR, EE 78.334. Similar responses are included in the Montgomery/Washington, 160 Spear, and 101 Mission SEIRs.) Earlier this year (also primarily in response to these commenters), a summary description of the forecasts was prepared. The

commenters are again referred to that earlier submittal. (See pp. 1-15 of the March 19, 1985 report to the Planning, Housing, and Development Committee of the Board of Supervisors, "Summary Description of C-3 District Growth Forecasts In the Downtown Plan EIR: What Was Done and Why It Is Reasonable".) All of the above referenced sections are incorporated by reference into this SEIR.

In this SEIR, the Downtown Plan economic analysis and forecast is used to ascertain an approximate time frame for cumulative impact analysis under the list-based approach. As shown in Table C&R 1, comparison between the Downtown Plan employment forecast and the employment growth to be accommodated by the additional space in projects on the March 22, 1985 List indicates that it would take through 1994 for the additional space to be absorbed by employment growth. In other words, it would take until the mid-1990s for there to be enough employment growth to absorb the additional space represented by projects on the List, according to the Downtown Plan forecast. [Table C&R 1 also shows that using the alternative employment forecast prepared by ABAG, it would take until after the year 2000 for enough employment growth to absorb the additional space represented by projects on the List. Description of this alternative approach follows in the next sub-section.]

As explained in the notes to the table, the amount of employment growth used for this comparison combines the Downtown Plan forecasts of office and retail employment growth in the C-3 District (growth of 84,870 jobs from 1984 through 2000; see Table IV.C.16 in the Downtown Plan EIR) with an estimate of potential additional growth of 40,000 jobs in the rest of the greater downtown area covered by the March 22, 1985 List (see pp. IV.C.47-IV.C.49 in Downtown Plan EIR). The C-3 District forecast of office and retail employment comes directly from the economic analysis and forecasts described above and in the references cited. The forecasts of only office and retail growth are used here since the List includes only retail and office projects. The growth estimate for the rest of the greater downtown was developed as a part of the Downtown Plan economic analysis described above, although it is a different type of estimate. It is a more general estimate, providing a scenario of potential future growth: what could occur as opposed to what is forecast or expected to occur. The scenario identifies potential growth in surrounding areas assuming the Downtown Plan policies in the C-3 District and assuming that shifts in activity into nearby downtown areas are allowed and encouraged by policies regulating growth in these other areas.

TABLE C&R 1: SUPPORTING INFORMATION FOR ESTIMATES OF TIME FRAME FOR THE CUMULATIVE IMPACT ANALYSIS UNDER THE LIST-BASED APPROACH

Estimate of Employment Growth to be Accommodated Downtown in Additional Space Represented by Projects on the March 22, 1985 List

	<u>Office</u>	<u>Retail</u>	<u>Total</u>
Net Additional Space ¹ (gross sq. ft.)	20,403,950	1,388,340	21,792,290
Employment Density Factors ² (gross sq. ft. per employee)	276	350	
Additional Employment ³	73,927	3,967	77,894

Estimates of Time Frame for Additional Space Represented by Projects on the List to be Absorbed by Employment Growth

	<u>Downtown Employment Growth 1984-2000</u>	<u>Employment Growth above (77,894) as a Percentage of 1984-2000 Forecasts</u>	<u>Approximate Time Frame for Absorption of Additional Space By Downtown-wide Employment Growth⁴</u>
Option A: Using Down- town Plan Employment Forecast ⁵	124,870	62%	1984 - 1994
Option B: Using ABAG ⁶ Employment Forecast	64,800	120%	1984 - 2003

NOTES:

¹See Table B-2.

²See Appendix E, pp. A-26 - A-27.

³Estimated by dividing the amount of additional space by the employment density factor.

⁴Approximated by applying the percentage in the previous column to the 16 years covered by the forecasts to estimate when enough employment growth to absorb the additional space on the list is expected to have occurred. This procedure uses the simplifying assumptions (appropriate for the approximation purposes of this long-term analysis) that average annual employment growth (number of additional jobs per year) is fairly constant throughout the forecast period.

⁵The amount of employment growth used here (124,870) combines the Downtown Plan forecasts of office and retail employment growth in the C-3 District (84,870; see Table IV.C.16 in the Downtown Plan EIR) with an estimate of additional growth of 40,000 jobs in the rest of the greater downtown area covered by the March 22, 1985 List (see later response to comments and pp. IV.C.47-IV.C.49 in Downtown Plan EIR). The 40,000 estimate for growth in the downtown areas surrounding the C-3 District is not a forecast of what is expected to occur, but, rather, describes a scenario of potential future growth which is dependent on policies which encourage growth in these areas. (See discussion in text.) (This non-C-3 estimate is for total growth, most of which is likely to be in office and retail activities. Separate estimates for office and retail employment are not available.)

⁶The Association of Bay Area Governments (ABAG) has projected downtown employment growth of 81,000 jobs from 1980 to 2000 (see June 1, 1984 letter submitted by ABAG as a comment on the Downtown Plan DEIR). This amount represents total employment growth, most of which is likely to be in office and retail activities. Estimates of only office and retail employment growth were not available. The figure shown here assumes that four years (or one-fifth) of that growth occurred from 1980-1984.

SOURCE: Recht Hausrath & Associates

Recent efforts to preserve nearby areas and limit the outward expansion of downtown activities raise questions about whether the estimated growth potentials will be achieved. The recent moratoriums and the policy options under consideration in areas where other planning efforts are currently in progress (such as South of Market and Chinatown) and policies recently adopted in another nearby area (North of Market/Tenderloin) indicate that the estimate of potential growth used here could be high. Actual future growth will be determined by the policies eventually adopted for these nearby areas, and forecasts of what is expected (considering these efforts) would probably show lower employment growth than the potential growth scenario used here.

Although there is uncertainty about whether the growth potential identified for the non-C-3 District parts of the downtown area will actually be achieved, it was reasonable to use this estimate for the purposes described in this response. To the extent that actual growth is lower than the estimated potential, the time frame for absorption of the additional space represented by projects on the List would be longer than estimated here. Thus, for purposes of cumulative impact analysis, the use of a potentially high growth estimate is a conservative assumption.

ABAG Forecast

The Association of Bay Area Governments (ABAG) prepares employment forecasts for all of the counties of the region. The ABAG projections consider national economic growth conditions, the relative competitiveness of the region's economy, and the ability of the region's land supply to support growth. The ABAG forecasts are done for regional planning purposes and are available for the region, for each of the nine counties, and for city-centered and selected unincorporated study areas. Special tabulations can be prepared by ABAG on a Census tract basis.

Because of the focus on regional planning, ABAG states that "although projections at the regional and county level have high probability of occurring given current information, sub-county and small area projections are subject to considerable uncertainty." (p.7, Projections '85). The projection methodology focuses on regional factors and trends; lesser levels of effort are spent in studying specific local conditions in the many jurisdictions and

sub-jurisdictions throughout the region. Background on the ABAG forecasts is presented in reports published by ABAG. The most recent is Projections '85 published in July 1985.

For the purposes of determining an approximate time frame for employment growth to occupy the space on the March 22, 1985 List, ABAG's projection of total employment growth in the downtown area (growth of 81,000 jobs 1980-2000) was used (see June 1, 1984 letter submitted by ABAG as a comment on the Downtown Plan EIR). The comparison between ABAG's projection and the employment growth to be accommodated by space on the List is shown in Table C&R 1. That comparison indicates that it would take several years after the year 2000 for there to be enough employment growth downtown to absorb the additional space in projects on the March 22, 1985 List.

Time Frame Used In SEIR

The time frame that is used for the list-based cumulative impact analysis in this SEIR is the one based on the comparison with the Downtown Plan forecast. The references in the SEIR to time frame for this impact analysis refer to this comparison. As explained in the SEIR, enough employment growth to absorb the additional space represented by projects on the March 22, 1985 List is expected to occur during the 1990s and probably by the mid-1990s (see pp. 37-38 of this SEIR).

If the other available forecast were used (the ABAG forecast), the time frame for the impact analysis using the list-based approach would be longer than assumed in this SEIR. The decision of which time frame to use for the SEIR analysis was conservative. The choice falls on the conservative side in terms of predicting employment growth and possible impacts.

The Role of Rents in Absorption

This section of the response defines rents in the context of real estate market operation and explains, using the downtown San Francisco office real estate market as an example, how rents are a factor in the absorption of space. The recent articles provided with this comment support this explanation. The response also explains how rents are considered in the long-term context of the estimates of absorption described in the preceding sections.

In the real estate market, rents are indicators of the market price for space. Rents reflect both the costs of production (supply factors) and the ability and willingness of businesses to pay for space (demand factors). Rents are also indicators of the overall operation of the real estate market. Changes in rents reflect changes in both supply and demand factors: for example, the amount and types of space available, the range of choices in competitive locations, business preferences for space of various types and in various locations, and the overall strength of economic activity.

The recent history of San Francisco's downtown office market provides a case study example of the role of rents as adjustment factors reflecting changes in the relative balance of supply and demand. Rents increase when the supply of space is scarce relative to demand. This was the situation in San Francisco in the late 1970s through the early 1980s. Rents were high and increasing while vacancies were low. In this situation, rents rise as high as the market will bear, i.e. as high as businesses are willing to pay before they start looking for alternative, lower cost, locations. The situation of increasing rents and low vacancy rates also stimulates a supply response, as the rate of return from investment in new space appears increasingly attractive. The resultant boom in office building construction introduces a change in the supply side which eventually affects the market price, i.e. rents. This scenario has occurred in downtown San Francisco since the early 1980s. Rents remain constant or decrease when supply is large relative to demand. When the large amount of space supplied by the boom in office building construction comes on the market, the situation is reversed from a seller's to a buyer's market. Potential tenants have a variety of options to choose from and lower rents (i.e. lower prices for space) are the principal market mechanism available to increase consumption.

The role of rents in the downtown office market is described in the Downtown Plan EIR for the purpose of explaining the implications of Downtown Plan policies on project feasibility and the rate of office development. (See Downtown Plan EIR, pp. IV.B.37-IV.B.41 and Appendix G, pp. G.11-G.17.) This dynamic process, in which rents are the mechanism by which a market equilibrium is sought between periods of scarce supply relative to demand and periods of large supply relative to demand, is one of the considerations in preparing the analysis and forecasts described above (both the Downtown Plan forecasts and the ABAG forecasts).

As illustrated above, and in the articles submitted with this comment, much of the everyday concern about office rents focuses on this role as a market adjustment factor during the short-term cycles that characterize the office real estate market. On the other hand, both the Downtown Plan and ABAG forecasts are concerned with long-term growth. Therefore, although rents, and their role in real estate market operations, are one of the factors considered in preparing these forecasts, it is largely from the perspective of identifying potential locations for office activity and their relative ability to attract growth over the long term. To develop a long-term 20-year forecast of growth, it is not necessary to specify the peaks and valleys of short-term cycles in the market place. In fact, it is precisely because of the role rents play as adjustment factors, bringing the market back into line from either the peak stage or the valley stage, that the long-term forecasting analysis can proceed on the understanding that short-term cycles are inherent in the market process, and, therefore, it is neither necessary nor appropriate to track them for the purposes of long-term analysis.

The articles submitted with this comment highlight the combination of supply, demand, and price (rent) factors working in the current downtown office market. They also point out that simply looking at rents and leasing activity for new buildings is not the full story on overall absorption and growth downtown. The articles describe the recent glut, or oversupply, of space as a consequence of many new projects being completed at the same time, in combination with the supply of space made available in existing buildings when companies move to the suburbs. The current increase in supply is not purely a response to the favorable market conditions evidenced in the preceding stage of the cycle (high rents, low vacancy rates). The articles mention both the interest of foreign and institutional investors in the real estate market (stimulated by the relative security of the investment, a favorable long-term outlook on rates of return, as well as favorable tax treatment), and the rush to build projects in San Francisco before the imposition of new controls on downtown development. Also during this time period, the conditions of oversupply were exacerbated by the overall economic slowdown which reduced the demand for space due to business start-ups and expansions.

The consequence of this large supply relative to demand has been that rents did not continue to increase (as they had in the immediately preceding stage of the cycle) and that rents have either been reduced or other means of reducing the costs of space (rent-free periods, generous improvement allowances, etc.) have been implemented. These inducements have had an effect on leasing activity. The articles mention high rates of leasing activity as businesses recognize the current situation to be a prime time to negotiate more favorable lease terms or upgrade their facilities. Other businesses are re-considering their plans to re-locate, as the differential between the cost of space in the suburbs and the cost of space downtown narrows. However, even with inducements that lower the costs of space to attract tenants, vacancies remain at higher than average levels (as described in the articles). In many situations, space in the new buildings is currently being leased at the expense of space in existing buildings (as tenants shift from older to new space, there is no net increase in overall occupancy). Although some of the leasing induced by lower rents has contributed to the overall occupancy of downtown space (net additions or absorption), the additional demand has not been large enough to fill (absorb) available space such that vacancies return to average (or lower) levels. This process occurs gradually over time.

Looking a little further ahead, to the next stage in the cycle, the articles also point to a supply-side effect of the current high vacancy situation. Fewer office projects will start construction in both San Francisco and suburban locations and fewer new projects will be proposed and financed in the immediate future. This supply response, in combination with the new restrictions in the Downtown Plan, is likely to eventually bring the market full circle--to the condition of lower vacancy rates and increasing rents, according to these articles.

The current scenario illustrated by these articles is not inconsistent with the longer-term forecasts used in the SEIR. The description of this current scenario highlights the importance of accounting for the overall absorption of space downtown (as indicated by the forecasts presented above) in order to measure downtown growth. The articles point out that much of the recent increase in leasing activity simply reflects relocation of existing downtown businesses and that this does not result in a net addition of occupied space downtown. Similarly, the articles also point to the importance of accounting

for space vacated by firms and divisions of firms moving to the suburbs in measuring the current overall market situation downtown. In other words, the occupancy of new space, encouraged by lower rents or other price inducements, is not the complete picture of the absorption of space downtown. The key consideration in determining the amount and rate of growth is the occupancy of both existing and new space--absorption throughout the overall market, described in the first part of this response as the approach taken in this SEIR.

Response to Commenters' Graph

The graph presented as part of this comment as a summary of the commenters' position has several flaws. Generally, the graph demonstrates a lack of understanding of the basis for cumulative impact analysis. It is also unclear as to which approach to cumulative analysis the graph is addressed (the list-based or Downtown Plan forecast-based). See the earlier discussion in this response for a description of absorption and how forecasts were used to estimate when the amount of additional space represented by projects on the List would be fully occupied. See also the subsequent response in Section A.2 addressing the time frame for measuring cumulative impacts using the list-based approach. The following response summarizes some of the material from these other discussions, with reference to the commenters' graph.

First, the line representing construction of projects on the List is not important to the consideration of absorption and time frame for the cumulative impact analysis. Just because a new project is constructed does not mean it immediately contributes to cumulative impacts. Only when the net addition of space represented by the project is occupied and absorbed by additional employment, i.e. when there is a net addition of employment downtown, can growth be said to have occurred for the purposes of measuring cumulative impacts.

Second, two lines showing the absorption of space represented by projects on the List could be drawn based on the information in Table C&R 1 above. The line representing what was used in the SEIR would end at a point similar to that shown in the graph, i.e. a line connecting 1984 with 1994 or the mid-1990s. (The lines should start in 1984 not 1985.) The other line would

connect 1984 with 2003 (beyond the year 2000). Regarding the slope of the line, it is not possible to construct these lines on a year-by-year basis. Neither forecast used to estimate time frame for the list-based analysis includes forecasts for each year during the forecast period. They are long-term forecasts provided for certain benchmark years (such as 1990 and 2000). For cumulative analysis purposes, the concept of absorption was used to establish an approximate time frame for analyzing impacts. The time frame identifies when it is reasonable to expect that the total amount of cumulative growth to be accommodated by the additional space in projects on the List will have occurred. Absorption on a year-by-year basis is not necessary and may be misleading.

Third, it is incorrect to say that "no additional space will be felt (sic) by the year 2000". By definition, the List of projects is limited to known projects. The SEIR analysis does not assume that no additional space will be built. If analysis determines that the amount of space on the March 22, 1985 List will be absorbed before the year 2000, then it is reasonable to expect that more space will be built by 2000. Since growth under the list-based approach is defined by the amount of space in projects on the List, however, there is no basis in this approach for adding space until new projects are proposed. No assumption is made about additional growth beyond the space in projects on the List. On the other hand, the cumulative analysis using the Downtown Plan forecast approach, by definition, incorporates an estimate of growth through the year 2000, whether this growth is represented by projects currently on a list or not. If the amount of cumulative growth analyzed in the list-based approach seems limited, the reader can refer to the Downtown Plan forecast approach also included in the SEIR. (For a more detailed response to a similar comment requesting the extension of the list, see One Sansome Building Final SEIR, pp.136-139, hereby incorporated by reference as summarized above.)

Fourth, the line showing that all impacts are analyzed only in the year 2000 is wrong. Under the list-based approach, the time frame for the impact assessment of cumulative growth is the mid-1990s, when all of the growth is expected to have occurred. In some cases, information is provided in the SEIR for both 1990 and 2000 if data or information for the mid-1990s were not

available. Under the Downtown Plan forecast approach, the impact assessment analyzes growth in 2000 since cumulative growth is defined as the amount expected to occur by that time.

Finally, the line which connects 1985 and 2000 in the graph is wrong. As it is now drawn, it indicates that all of the growth will occur in only the year 2000. Neither of the impact analyses in the SEIR make this assumption. Rather, cumulative impacts are measured when all the growth has occurred. It is not reasonable or appropriate to expect cumulative impact analyses to provide year-by-year accountings of impacts. It is assumed that the public and decision-makers understand that there will be impacts along the way, but that they cannot be precisely timed to specific years and that the end-points measuring total growth are sufficient for assessing the implications of these project approval decisions. This is standard practice in environmental impact reports, as well as in other studies involving long-term assessments.

Explanation of Alleged Discrepancy

In the last section of this comment, the commenters present a series of numbers and statements comparing the Downtown Plan forecasts with the March 22, 1985 List. The commenters claim that these numbers represent a discrepancy, though they do not state what the discrepancy is. It appears that the commenters are referring to the implication of these comparisons which show the List with a greater amount of space to be absorbed in a shorter time period (through mid-1990s) than the Downtown Plan forecasts show for a longer time period (through 2000). The implication being: how can more space be absorbed in a shorter time period?

This alleged discrepancy does not exist. The commenters make inappropriate comparisons and have used the wrong numbers to do their calculations. The problem is similar to that addressed in a subsequent response related to correspondence between the commenters and the Department of City Planning regarding tables prepared by the commenters. The commenters have overlooked important definitional distinctions and basic differences in geographic coverage and time frame between the Downtown Plan C-3 District forecasts and the March 22, 1985 List.

[It should be noted that these differences are simply products of the decision to use two different approaches for the cumulative analysis in this SEIR. The Downtown Plan forecasts and the List were each prepared for different purposes, and are presented separately in the SEIR as different estimates of cumulative growth. They are not directly compared in the SEIR as there is no reason or basis for doing so. The SEIR does include a section describing the differences and a chart (Figure 3, p. 39) which clearly summarizes these differences on each point. There is, consequently, no basis for the insistence on comparisons that have no analytical validity.]

The commenters also appear to have overlooked information describing the C-3 District forecasts, which is clearly presented in the Downtown Plan EIR text and tables. This response discusses the numbers presented by the commenters, pointing out where the correct numbers can be found in the Downtown Plan EIR and suggesting alternative and appropriate means of comparing the Downtown Plan forecasts to the projects on the March 22, 1985 List.

As presented by commenters:

"DTP EIR: 21.7 Million Square Feet"

"Cumulative List - March 22, 1985: 21.8 Million Square Feet"

- The source of the 21.7 million square feet is Table IV.B.11 on p. IV.B.34 of the Downtown Plan EIR. The table shows the changes in C-3 District space by use under the Downtown Plan, for the 1981-2000 forecast period. The 21.7 million figure refers to the overall net change in space, accounting for all uses, for the 1984 through 2000 period.
- The source of the 21.8 million square feet is the March 22, 1985 List of Projects in the greater downtown area. This is the total of the net addition of both office and retail space in projects on the list.
- There is no discrepancy between these numbers, they simply represent different things. There are several problems with the implicit comparison, however. First, the Downtown Plan forecast is only

for the C-3 District, while the List includes projects throughout the greater downtown area, of which the C-3 District is a part. Second, the Downtown Plan forecast represents changes in building space estimated for a specific time period, from 1984 through the year 2000. There is no specific time period associated with the List; it is simply a compilation of projects known as of the date of the List. Finally, the number chosen by the commenters in this instance to illustrate the Downtown Plan forecasts represents the net change in space in all uses. As such, it incorporates the new construction of both office, retail, and hotel buildings; the demolition of office, retail, housing, industrial/warehouse, and other space; as well as the conversion of existing space from one use to another. On the other hand, the number 21.8 million from the March 22, 1985 List represents only total space in office and retail projects.

- There are clearly many differences between these two numbers, which makes their direct comparison in this way relatively meaningless. A more appropriate comparison is suggested at the end of this section of the response. (The fact that the two numbers are very similar is only a coincidence.)

As presented by commenters:

"DTP EIR Office Space to Be Absorbed by 2000 (DTP EIR IV.B.34): 16.8 Million Square Feet"

"Cumulative List Office Space to Be Absorbed by Mid-1990's (SEIR p. 38): 20.4 Million Square Feet"

- The comparison of these numbers can only be judged with the addition of a few simple but essential words, as shown underlined in the version below:

DTP EIR Office Space in C-3 District to Be Absorbed by 2000 (DTP EIR IV.B.34): 16.8 Million Square Feet

Cumulative List Office Space in Greater Downtown to Be Absorbed by Mid-1990's (SEIR p. 38): 20.4 Million Square Feet

- With the addition of these critical words, it becomes clear that the Downtown Plan EIR number represents growth in a smaller area, and it is thus not unreasonable that it is a smaller number. The issue of the time period attached to the forecasts is discussed below.

As presented by commenters:

"DTP EIR Office Space to Be Absorbed between 1984-1990 (DTP EIR IV.B.24-25): 9.8 Million Square Feet"

"DTP EIR Office Space to Be Absorbed between 1990-2000: 7 Million Square Feet"

"Cumulative List Office Space Absorbed between 1990 - mid-1990's: 10.6 Million Square Feet"

- These final three statements contain most of the same problems identified above. In addition, the commenters have used the wrong numbers from the Downtown Plan EIR and have apparently overlooked the forecast numbers they needed, implying that new calculations were necessary to derive these numbers. This is not true.
- Corrected versions of the first two statements using the Downtown Plan forecasts are presented below (corrections and additions underlined):

DTP EIR Office Space in C-3 District to Be Absorbed between 1984-1990 (DTP EIR Table IV.B.11 p. IV.B.34: 8.4 Million Square Feet

DTP EIR Office Space in C-3 District to Be Absorbed between 1990-2000 (DTP EIR Table IV.B.11 p. IV.B.34: 8.4 Million Square Feet

- Again, in both statements, the essential words describing the geographic area for the forecasts are needed.
- In the first statement, the square footage of office space absorbed is revised to show the correct number for net additional office space (8.4 million gross sq. ft.). The commenters mistakenly use the number representing total space in office buildings from Table

IV.B.7, pp. IV.B.24-IV.B.25. Apparently, the commenters did not read the associated text on pp. IV.B.24-IV.B.27 which outlines in some detail the difference between total space in office buildings and the net addition of occupied office space. [It is interesting to note that the commenters used the forecast representing the net addition of space in two earlier statements (21.7 million square feet and 16.8 million square feet). Both of these numbers are presented on Table IV.B.11, along with the comparable number for office in the 1984 to 1990 period: 8.4 million square feet.]

- Similarly, in the second statement, the commenters overlooked the 1990-2000 forecast of the net addition of C-3 District office space shown in Table IV.B.11 and discussed in the text on pp. IV.B.32 and IV.B.36. This number appears in the very same line of the table referred to elsewhere by the commenters. There was no need to do any extra calculations.

[Besides which, the calculation is wrong. To arrive at the 7 million square feet figure, the commenters subtracted 9.8 million (total space in office buildings) from 16.8 million (net addition of office space). Given the way the forecasts were done and following the description in the text, this is wrong. The correct calculation (though not necessary) is to subtract 8.4 million (net addition of office space) from 16.8 million (net addition of office space) the result being 8.4 million square feet as indicated above. The fact that these numbers are the same is only a coincidence.]

- The commenters' final statement is an attempt to combine the Downtown Plan C-3 District office forecasts by time period with the March 22, 1985 List of projects in the greater downtown area to derive an estimate of the amount of space on the List that would be absorbed after 1990. To arrive at the 10.6 million square feet estimate, the commenters subtract 9.8 million (total space in office buildings built in C-3 District 1984-1990) from 20.4 million (total office space in projects throughout the greater downtown on the

March 22, 1985 List). In doing this, the commenters imply that the estimates of office development cover the same geographic area. This is not so. These two different sources of numbers related to future office development cannot be combined in this way.

- To compare the office projects on the List to the Downtown Plan forecast properly, requires a different set of numbers. It is possible to compare the C-3 District forecast of total space in office buildings from 1984 through 2000 to the total office and retail space in C-3 District projects on the March 22, 1985 List.

DTP EIR Forecast of C-3 District Space in Office Buildings, 1984-2000 (Table IV.B.12, p. IV.B.35): 18.3 Million Square Feet

Cumulative List of C-3 District Office Projects Absorbed 1984-Mid-1990s: 14.7 Million Square Feet

The comparison of these two statements shows no discrepancies.

The emphasis on the distinction of geographic areas is not merely a technicality; it is critical to the response to the commenters' arguments. It is also not an obscure detail of the Downtown Plan EIR economic forecasts: the titles for all of the tables presenting the forecasts include the words "C-3 District" and the EIR text description of the forecasts consistently refers to this specific area. (It is the project area for the Downtown Plan EIR.) For the commenters to ignore this important distinction results in a mis-statement of what the Downtown Plan EIR and this SEIR present in terms of cumulative growth, creating unnecessary confusion.

If detailed office space forecasts had been prepared to represent the greater downtown area, then there would be larger numbers for the forecasts. Comparisons for the greater downtown area can be made using employment growth estimates derived using each of the two approaches. These are presented in response to the last comment in Section A.3 of these responses.

COMMENT

"P. 6 Please make clear that the Downtown Plan EIR methodology is the source of the 'absorption' concept." (San Franciscans for Reasonable Growth)

RESPONSE

The Downtown Plan EIR methodology is not the source of the absorption concept. As explained in the first response in this section of responses, absorption is a standard term and concept used in real estate analysis and development planning. The concept and the use of the word existed long before the Downtown Plan EIR was undertaken.

The Downtown Plan forecast was one of the forecasts used to approximate a time frame for the impact analysis using the list-based approach. The first response in this section explains how this was done. The assessment of the impacts of growth (on transportation, housing, etc.) under the list-based approach does not follow the Downtown Plan EIR methodology, however. Thus, the use of the Downtown Plan economic analysis and employment forecast for purposes of approximating time frame does not contradict the fact that the two approaches to cumulative impact assessment (the list-based and the forecast-based) are different and separate. While the March 22, 1985 List defines the amount of growth to be analyzed, it does not define the time frame for that growth. The approach used to identify an approximate time frame in this SEIR is reasonable and appropriate for that purpose.

Regarding the Downtown Plan forecast approach for cumulative impact analysis, the Downtown Plan economic analysis and employment forecast are used to define growth and the Downtown Plan EIR impact analyses are used to identify the impacts of growth on transportation, housing, etc.

COMMENT

"The words 'overall downtown market' stand out. Does this include space that is vacated by the tenants moving into the new building? There was an example of Macy's Amfac and the Citicorp building in the Montgomery/Washington SEIR p. 134 that described this dynamic. If that is what is meant by absorption of the market, then would it not be more correct to measure the gross square feet of a building as it's size since tenants may be

coming from buildings that already exist. In other words, if it is difficult to measure, would not the gross square feet at least give decision makers a better sense of the amount of space that is actually out there in San Francisco waiting to be absorbed?" (San Franciscans for Reasonable Growth)

RESPONSE

The commenter singles out the words "overall downtown market" from a paragraph describing the rationale for determining the time frame for absorption of the additional space provided by projects on the list as part of the cumulative impact assessment. A key point of the paragraph, and that noted by the commenter, is that, from the perspective of cumulative impact analysis, it is the amount of space added to the total supply of space downtown that is the appropriate unit for measuring growth. Although the specific occupancy of the projects per se is not relevant, the amount of additional space they represent is the amount of additional space that must be absorbed throughout the "overall downtown market".

This discussion does refer to the dynamic situation in which space in a new office building may be occupied by a firm that moves there from other space only a few blocks away, thus setting up a potential chain of events in which the ultimate addition of jobs (or workers) in the downtown area occurs through the occupancy of space in older existing buildings vacated by the previous tenant. The understanding of this dynamic situation highlights the importance of accounting for total space occupied in all buildings not just space in new buildings (or the specific projects on the List). This pattern is described in the document referenced by the commenter as part of a response to clarify and define the perspective and relevant data for cumulative impact assessment.

The cumulative impact analysis in the SEIR uses the net additional square feet represented by projects on the List to measure the amount of space added downtown, i.e., the growth. The difference between net additional space and total space is the amount of space replaced, generally through demolition of an existing building for new construction. To properly measure the amount of growth (what has been added to total downtown space) as a consequence of the projects on the List, the space replaced (demolished) is subtracted from the total building area, to arrive at the estimate of net additional space. It is true that the total space represented by projects on the List would eventually be absorbed.

Some of this absorption, however, is not a net addition to the total downtown, since it simply represents a replacement of previously existing space. Therefore, the cumulative growth assessed in the SEIR measures absorption of net additional space.

The last part of this comment indicates some confusion as to how building space is measured in the SEIR. In both the Downtown Plan forecast approach and the list-based approach, building space is measured in terms of gross square feet. The references in the SEIR and the Downtown Plan EIR to "net additional" or "net new" square feet of space do not mean net square feet as in "net rentable square feet" or "net occupiable square feet". Both total and net additional building space are measured in terms of gross square feet. Generally, the use of the term "net" in the SEIR refers to the total gross square feet of space in the new building less the gross square feet of space demolished in an existing building on the site.

COMMENT

"P.30 Third paragraph. How does the fact that the City's employment has 'increased substantially' effect [sic] 'absorption'. Please relate this to the List Approach and the Downtown Plan Approach." (San Franciscans for Reasonable Growth)

RESPONSE

The comment refers to part of the Residence Patterns and Housing Setting describing overall trends in the distribution of jobs and labor force throughout the Bay Area. This discussion is unrelated to either the list-based approach or the Downtown Plan forecast approach to cumulative impact assessment. In addition, the context for the discussion of employment growth in San Francisco in this section (describing the relationship between work place and residence, as well as overall housing market conditions) is not directly related to "absorption" as used elsewhere in the SEIR sections describing cumulative impacts. Even taken out of context, the statement that "the City's employment has increased substantially" can be said to imply that substantial amounts of space have been absorbed. The Land Use Setting in this SEIR and the Employment and Land Use sections of the Downtown Plan EIR (the appropriate contexts of this discussion) provide the description and data to support this statement.

COMMENT

"I find the absorption question troubling. Does it mean we will not be counting all sq. ft. that are being built? Seems foolish to think it's being built to be empty. I think it should all be counted, else in 2001 when the space is 'absorbed' citizens of S.F. will think we were either careless or mendacious in allowing such growth." (Commissioner Susan Bierman)

RESPONSE

The commenter is referred to the preceding responses addressing absorption and why this "concept" is part of the cumulative impact analysis. The commenter is also referred to the responses to comments in the following section which address specifically the question of the relationship between building construction and the absorption of space which results in a net addition of occupied space, i.e. the growth that is the subject of cumulative impact analysis. That section of the responses explains that the SEIR does not assume buildings are built to remain empty.

It is important to understand that the use of the specific years 1990, mid-1990s, and 2000 in the SEIR does not mean that the growth (and associated impacts) would occur only in those years mentioned. It is basic to understanding the process of a city's growth and development to understand that the process occurs gradually over time. As noted in a preceding response, the SEIR uses benchmark years (1990, mid-1990s, 2000) when total cumulative growth (as defined in the two different approaches) is estimated to be in place. The SEIR analyses do not presume that no impacts would occur until those years. It is not possible or necessary for the SEIR to specify growth and impacts on an annual basis.

2. List-Based Approach/Time Frame for Impact Assessment

COMMENT

"A. THE SEIR DOES NOT USE THE CORRECT TIME FRAME FOR COMPLETION OF THE PROJECTS ON THE 'MARCH 22, 1985 LIST' OF PROJECTS.

"It is reasonable to presume that virtually all of the projects on the March 22, 1985 List will be completed by 1990. The March 22, 1985 List contains 20.4 million square feet of office development for the greater Downtown area of San Francisco. This SEIR does not make a reasonable estimate of the time frame over which impacts due to this development will occur.

"Instead, the SEIR claims an extraordinary, unrealistically-lengthy time frame for the impacts of the List by stating the projects on the March 22, 1985 List will not be 'absorbed' until 'possibly the mid-1990s'. In fact, since the transit capacities used in the SEIR analyses associated with buildout of the List are the capacities presumed for the year 2000, as explained in Section D below, the analyses actually presume that 'absorption' will not occur until the year 2000.

"This is an entirely unrealistic time frame for buildout, chosen to minimize the environmental impacts associated with the Cumulative Impacts of the projects on the March 22, 1985 List.

"The time frame for completion of the projects on the March 22, 1985 List is critical to the assessment of the cumulative impacts of the List of projects. In order to perform a reasonable and objective environmental impact analysis, it is crucial to know both the cumulative amount of Downtown office development and the time frame in which this development will occur, as impact analysis requires a comparison of the demands of new employees against the spare capacity of the infrastructure at the time of the impact.

"Transit, transportation and housing infrastructure to accommodate the new workers due to office development can only be built at a certain pace. If office development occurs twice as fast as anticipated, predictions of transit, transportation and housing conditions based on the lower rate of development will be radically wrong. For instance, the Bay Bridge can accommodate 9000 cars per hour. If 9000 cars try to cross the Bridge during one hour, there are no major problems. But, if 18,000 cars try to cross the Bridge during that same hour, the result will be a traffic jam of cars 4 lanes wide and 8 miles long waiting to cross that Bridge.

"Why was this type of analysis done? Data that is available clearly indicate that the buildings on the List will be completed by 1990 (See Section B and C below) and that the adequacy, accuracy, and objectivity of the cumulative impact analyses in the SEIR are precluded by the Department's refusal to use a reasonable estimate of the time-frame for completion of the projects on the List.

"Where is the data on 'absorption' to support the time frame of mid-1990's as discussed in this SEIR. It should be noted that the Department does have the data with which to make a reasonable judgment on when the cumulative list of projects would be constructed. In response to SFRG questions, the Final SEIR for Montgomery/Washington project (which is a similar SEIR, but analyzes the March 10, 1984 List) states that:

'Assuming an average of three years from approval to full occupancy (as in the DTP EIR), then projects that are approved or under construction on the March 10, 1984 List would be built about 1988. For projects under review estimates would be more speculative.'

M/W SEIR p.132.

"For example, the City Planning Commission will be approving project and certifying EIRs for 1.7 million net square feet of office space within a few weeks of the hearings on this SEIR. Surely the DCP was long aware that the formal review process for these new EIRs was approaching and it was very probable they would be scheduled for EIR hearings once the Downtown Plan had been passed by the Board of Supervisors. (The SEIR mentions August 1985 as the scheduled date of passage for the Downtown Plan.

"The next logical assumption is that these projects: Hills Brothers; 100 First Street; 101 Hayes, 299 Second, Embarcadero Office Terraces, 150 Green Street, 55 Fifth, 1035 Market, 35 Hawthorne, 340 Townsend, 998 Sansome would all be approved shortly after the passage of the Plan).

"However, the SEIRs only estimate that the 20.4 million square feet of projects on the March 22, 1985 List would be 'absorbed',

'... between 1990 and 2000; probably during the mid-1990s'. (p.39)

"This is patently unreasonable.

"Two questions are extremely germane to the adequacy of the SEIR:

1. By when is it probable, or reasonable to assume, that projects on the March 22, 1985 List will be constructed?

and,

2. By when is it probable, or reasonable to assume, that the projects on the March 22, 1985 List will be occupied?

"This section will address the first question. Section B will address the second question. The SEIR for the Montgomery/Washington project EE #81.104 (which is a very similar Supplemental EIR to this EIR with the exception of the stated estimate for a time frame for the 'absorption' of the List) states that it would be speculative to state when projects under formal review would be completed. However it does state that:

'Assuming an average of three years from approval to full occupancy (as in the DTP EIR), then projects that are approved or under construction on the March 10, 1984 List would be built by about 1988.' (Supra)

"SFRG-1 shows the amount of office space approved by the Planning Commission each year since 1976. SFRG-2 shows that 14.6 million net square feet of the 20.4 million net square feet on the March 22, 1985 List had been approved by the date the SEIRs were published. This represents 72% of the List. An additional 1.7 million net square feet of Downtown office space on the List has had Draft EIRs released by the Department and is scheduled for approval hearings in the next few weeks. Projects already approved or scheduled for approval in the Autumn of 1985 therefore represent 16.3 million net square feet, or 80% of the project list. By Autumn of 1985, there were only 4.1 million square feet of the 20.4 million square feet on the List that were not already approved or scheduled for approval.

"Assuming three years from project approval to full occupancy, as discussed above, these 16.3 million square feet of projects will be built and occupied by new employees by the Spring of 1988. This means at least 80% of the March 22, 1985 List will probably be built and occupied by 1988.

"It is also reasonable to assume that the Commission will continue to approve additional office development in the remainder of 1985 and throughout 1986 and 1987. The Mayor's Cap of 950,000 square feet per year or 2.85 million net square feet for the next three years guarantees at least an additional 1.2 million net square feet of office space will be approved. This raises the amount of projects certain to be approved to 17.5 million net square feet. It should be remembered that the way the ordinance is drafted, the 2.85 million square feet can be approved in the first year of the three year Cap. This quota could be 'used-up' by late 1985 or early 1986.

SFRG-1

C-3 and non-C-3 Office Approvals in Million Square Feet
1976-1985

<u>Year</u>	<u>C-3</u>	<u>Non-C-3</u>	<u>Total</u>
1976	190,000		190,000
1977	1,133,219	112,432	1,245,651
1978	1,097,878	860,000	1,957,878
1979	3,888,050	302,450	4,190,500
1980	1,332,450	836,400	2,168,850
1981	2,716,400	1,107,800	3,824,200
1982	3,027,390	1,719,900	4,744,290
1983	2,535,700	859,000	3,394,700
1984	2,516,856	472,500	2,989,356
1985	876,400	451,000	1,327,400

*1985 is as of September 1, 1985

SFRG-2

	<u>MSF (net)</u>
Total Projects on March 22, 1985 List (office space)	20.4
Total Projects on March 22, 1985 List approved and under construction by (office space) publication date	13.9
Total Projects on March 22, 1985 List approved and under construction (office space) by publication date of SEIRs (August, 1985)	14.6
-72% of the List Approved by August 1985-	
Total Projects on March 22, 1985 List scheduled for approval within a few weeks of SEIR hearing (office space)	1.7
-80% of the List Approved by Fall 1985-	
Projects Remaining to be Approved after Fall 1985 (office space)	16.3
Remaining Projects to be Approved under the Mayor's Cap	1.2
Total Projects approved after quota from Mayor's Cap is filled	17.5
Conservative Estimate of projects to be approved exempt from cap over the next three years	1.5
Total Projects approved by 1988	19.0
-93% of the List Approved by Fall 1988-	

"Additionally, there is an exemption from the Cap for projects under 50,000 net square feet. Based on the number of project of this size on the March 1985 List, (52 projects totaling 1.9 million net square feet SFRG conservatively estimates there will be at least 500,000 net square feet of projects this size in Downtown San Francisco during the next three years. Given the built-in incentive to avoid the Cap and the requirements of the Downtown Plan this number may well be much higher. This raises the total likely to be approved to 19 million net square feet or 93% of the List.

"There only need be 1.2 million net square feet of projects this size to reach the equivalent of 20.4 million net square feet on the March 22, 1985 List.

"Assuming three years from project approval to full occupancy, square footage in projects equal to nearly all of net square feet on the March 22, 1985 List will be approved by 1987 and will be built by 1990.

"If the Department had simply checked its own record, it could have noted that 72% of the March 22, 1985 List was approved before the SEIR was published, an additional 8% of the List was scheduled for approval hearings in the Autumn of 1985, and that the 93% of the list will be approved, constructed and occupied by 1990, under the Mayor's Cap of 2.85 million net square feet for the next three years and the exemption for projects under 50,000 net square feet.

"It should also be noted that the Mayor's Cap ends in three years and during this time the Department of City Planning has no restriction on processing applications and certifying EIRs. Is it not inconceivable, therefore that the Department could process 1.2 million net square feet of applications prior to the Fall of 1988 and have them ready for approval shortly thereafter?

"It is therefore reasonable to presume that the amount of development in the March 22, 1985 List would be built and occupied by 1990 or 1991.

"Please explain how the Mayor's Cap and the 50,000 net square feet Exemption in the Cap effect [sic] the 'absorption' of the List.

"In its response to SFRG's Board of Permit Appeals brief, the City made the obfuscatory point that the 'average schedule' of a project is six years from initiation of formal review to full occupancy, and does not mean all projects will take six years. (pages 7 and 8 of the City's Brief and incorporated by reference here).

"It should be clearly noted, that SFRG has not based its conclusions on the time frame from formal review to project occupancy; it has based its conclusions on an approximate time frame of 3 years from project approval to full occupancy, as noted in the SEIRs, and quoted above. We do note, however, that the Department declined to respond to SFRG's request to provide a more precise breakdown of how long projects require from approval to completion. (See Montgomery/Washington SEIR EE #81.104 p. 132. As noted above the M/W SEIR is similar in many respects to this SEIR)

"The City's own estimate of three years from project approval to occupancy, utilized in the four Court of Appeal SEIRs, is indeed reasonable. SFRG-3 is from Table C-1 of the 299 Second Street EIR (BPA Tab 61 p. 2588-2590) and shows the application and approval dates for 35 office buildings occupied in 1983. This table shows that the average time from project application to occupancy for these projects was 3.1 years. SFRG did not selectively choose the projects that were in this table. It is taken directly from the 299 Second Street Draft EIR. SFRG questions why this Table was not included in this Supplemental EIR as a aid to the decision makers on the issue of 'absorption'.

"SFRG-4 shows a list of 20 office projects approved by the Commission in 1981 and SFRG-5 shows a list of 36 office projects approved in 1982. With the notable exception of the China Basin Building, all of the buildings approved in these two years have received their building permits. (Although for many of the buildings SFRG was unable to obtain the dates of the building permits, these buildings are either under construction or completed, so it can be assumed that building permits were obtained.)

"Except for Apparel Mart III and the China Basin Building all buildings approved in 1981 have completed construction or were under construction in 1984. Except for Marathon and the South End Warehouse, all buildings in excess of 50,000 square feet approved in 1982 have finished construction or were under construction in 1984. (SFRG was not able to obtain the record for buildings under 50,000 square feet)

TABLE D-1

PROJECTS COMPLETED BEFORE 1984 But Not In Base Case Analysis

Assessor's Block	Case No.	Project Name	Office Gross Sq. Ft.		Retail Gross Sq. Ft.		Data Occupied
			Total New Construction	Net New Construction	Total New Construction	Net New Construction	
108	01-415ED	1299 Sansome	41,000	41,000	3,500	3,500	1983
141	01-151EV	100 Broadway	13,000	13,000	---	---	1983
193	EP91.1	901 Montgomery	83,000	83,000	19,900	19,900	1983
164	01-931D	947 Sansome	23,758	23,758	---	---	1983
164	01-351D	336 Montgomery	21,500	11,500	---	---	1983
194		736 Montgomery	40,900	40,900	---	---	1983
189	CU79.49	Pacific Lumber Co.	92,000	92,000	---	---	1983
206	01-165D	401 Washington/Battery	13,209	13,209	1,800	1,800	1983
228	01-610RD	999 Sacramento (C)	19,900	19,900	---	---	1983
237	DR00.8	353 Sacramento (Dean)	279,000	251,000	9,300	-2,000	1983
240	DR00.18	550 Kearny (Addition)	71,400	71,400	---	---	1983
263	CU79.12	101 California	1,265,000	1,237,000	21,700	-14,300	1983
267	01-550D	Sloane Building (C)	129,300	125,300	30,000	30,000	1983
292	DR79.13	Crocker National Bank	978,000	435,000	88,000	54,000	1983
312	EE79.370	50 Grant	90,000	90,000	---	---	1983
313	EE77.257	Nieman Marcus	---	---	143,000	128,000	1982
351	DR79.133	18 U.N. Plaza	92,050	92,050	---	---	1983
726	BPRA	One Flynn Center	25,000	25,000	---	---	1983
762	BPRA	Opera Plaza (M)	50,000	50,000	---	---	1983
3510	01-403V	291 10th St.	25,700	25,700	---	-25,700	1983
3702	EE81.25	1155 Market/8th	130,700	130,700	8,000	8,000	1983
3709	DR00.34	25 Jessie/Ecker Square	111,000	111,000	---	---	1983
3709	DR00.38	Five Fremont Center	781,200	712,700	35,000	17,300	1983
3712	DR79.11	Federal Reserve Bank	940,000	640,000	---	---	1983
3717	EE79.413	150 Spear	330,000	330,000	---	---	1983
3719	DR79.12	Pacific Gateway	540,000	540,000	7,500	7,500	1983
3724	BPRA	Yerba Buena West	335,000	335,000	---	---	1983
3732	01-640DB	468 Clementine (C)	15,156	15,156	---	---	1983
3735	BPRA	Convention Plaza	339,900	339,900	---	---	1983

TABLE C-1
(continued)Completed But Not in Base Case Analysis (continued)

Assessor's Block	Case No.	Project Name	Office Gross Sq. Ft.		Retail Gross Sq. Ft.		Data Occupied
			Total New Construction	Net New Construction	Total New Construction	Net New Construction	
3735	8FRA	Plantor's Hotel (C)	20,000	20,000	---	---	1983
3752	EE77-220	Office Bldg. (YBC 80-1)	11,000	11,000	---	---	1983
3763	81.287V	490 2nd/Bryant (C)	40,000	40,000	---	---	1983
3783	81.381	480 2nd/Stillman (C)	35,000	35,000	---	---	1983
3783	82.384EVN	400 2nd Street at Harrison (C)	71,500	49,500	---	---	1983
3776	81.693EV	539 Bryant/Zoe (C)	83,000	83,000	---	---	1983
	TOTAL		6,504,450	8,188,450	367,400	327,100	

(C) = Conversion (generally industrial and/or warehouse to office)
 (M) = Mixed Use (office/residential/commercial)

Source: Department of City Planning

SAN FRANCISCO DOWNTOWN PROJECT APPROVALS

1981

Approval Date	Project Name	Office	Building Permit Issued	Permit No.	Time Lapse (months)	Constr. Status
C-3 OFFICE PROJECTS						
3/12/81	Five Fremont	843,000	4/14/81	470319	1mo	83
3/26/81	Apparel Mart III	332,400	10/6/83	506538	2yr7mos	
5/7/81	101 Montgomery	264,000				83
8/6/81	One Sansome	603,000	5/6/82	481263	9mos	84
8/13/81	1155/75 Market	147,500				83
8/27/81	101 Mission	219,350	3/29/82	480137	7mos	83
10/8/81	437 Grant	37,000	7/19/82	491892	9mos	b
11/5/81	216 Sutter	155,300				b
12/17/81	401 Washington	22,000	6/14/82		7mos	b
/81	One Holland Ct	27,850	6/4/82	450599	6mos+	b
/81	Convention Plaza	339,000				83

NON C-3 OFFICE PROJECTS

4/23/81	220 Pacific	142,000				b
5/12/81	Vanguard	85,000				b
6/10/81	China Basin Bldg	196,000				
6/25/81	211 Gough (Conv)	7,100	6/11/82	490818	1yr	b
8/20/81	901 Montgomery	81,900				b
11/17/81	Ice House (Conv)	209,000				b
/81	1066 Grant	6,200				
/81	936 Montgomery (C)	25,000				b
/81	868 Folsom	65,000				

SOURCE: Approval date and size from City records as noted in SFRG-26.
Date of permit issuance and permit number from review of building permits at Central Permit Bureau and from SFRG records. Much of information for 1981 and 1982 is already archived, so lack of permit

information does not mean that no permit was granted. Year of construction taken from Downtown Plan, Proposal for Adoption, 11/29/84, Table 1, page 9 (SFRG-35) and from personal observation.

- a - Building under construction according to 3/10/84 list or from visual observation by SFRG.
- b - Construction complete according to visual observation by SFRG.

SFRG-34

SFRG 5

1982

Approval Date	Project Name	Office	Building Permit Issued	No.	Time Lapse (months)	Constr. Status
C-3 OFFICE PROJECTS						
1/14/82	466 Clementina	15,200	9/14/82	493446	9mos	b
1/28/82	Mont/Washington	235,000	5/6/82	481265	4mos	84
2/11/82	Spear/Main	279,000	5/10/82	481328	3mos	85
3/11/82	44 Campton Pl	3,600				b
3/11/82	774 Tenama	5,800				
3/18/82	569 Sacramento	19,000	10/5/82	494031	7mos	b
5/13/82	250 Montgomery	113,190	7/22/83	503720	1yr2mos	a
5/13/82	121 Steuart	49,500	6/17/82	490990	1mo	b
6/10/82	333 California	640,000	12/2/82	495745	6mos	a
7/15/82	Bank of Canton	230,500	9/15/82	493492	2mos	84
7/15/82	201 Spear	229,000	12/10/82	496003	5mos	a
7/15/82	Central Plaza	353,100	8/19/83	504945	1yr1mo	a
7/22/82	SF Federal	246,800	12/30/82	496419	5mos	a
8/12/82	466 Bush	86,700	8/19/83	504926	1yr	a
11/18/82	90 New Mont.	124,300	3/11/83	498550		a
11/30/82	135 Main	260,000	12/30/82		1mo	84
/82	144 Second (Conv)	50,000				84

NON-C-3 OFFICE PROJECTS

2/16/82	Wealth Investment	104,500	3/11/83	498571	1yr1mo	a
2/25/82	1000 Mont'y (Conv)	39,000				a
3/12/82	480 Second (Conv)	35,400	4/29/82		1mo	84
3/19/82	490 Second (Conv)	40,000	4/29/82	481061	1mo	84
5/13/82	539 Bryant (Conv)	86,700	11/9/82	495182	6mos	84
5/20/82	SouthEnd Wrense(C)	157,200				
5/20/82	Marathon	754,000	4/29/83	500385	11mos	
6/3/82	1660 Mission (Cnv)	177,200	1/13/83	496743	7mos	84
6/10/82	1299 Sansome	41,000	9/14/82	493438	3mos	84
6/17/82	50 Osgood	59,800	10/31/83	507520	1yr4mos	a
7/8/82	44 Gough (Conv)	30,000				
7/19/82	1581 Bush	16,000				
7/23/82	990 Columbus	12,000	10/5/82	494043	2mos	84
8/5/82	Francisco Place	50,000				
10/2/82	955 Front	50,000				
11/1/82	155 Townsend	53,000				
11/10/82	Savoy	49,000	5/9/83	500680	6mos	84
11/19/82	900 Kearny	25,000				
/82	847 Sansome	23,800				

"The purpose of SFRG-3, 4 and 5 is merely to conclusively demonstrate that it is reasonable to presume that approved projects will be built, and that the time frame from application to occupancy is approximately three years.

"Please explain why this is not a reasonable analysis of the projects on the March 22, 1985 List and why the assumption of '... between 1990 and 2000; probably during the mid-1990's' (p.39 201 Spear St SEIR) is a better analysis. Please answer as specifically as possible giving special attention to the Mayor's Cap, the Exemption for projects under 50,000 net square feet, and recent historical information culled from the City's files.

"B. IT IS REASONABLE TO PRESUME THAT THE OFFICE PROJECTS ON THE MARCH 22, 1985 LIST THAT WILL BE CONSTRUCTED BY 1990, WILL BE OCCUPIED BY THE END OF 1990.

"As noted in the above discussion, it is reasonable to presume that square footage equal to the 20.4 million square feet of office space on the March 22, 1985 List will be built and occupied by 1990.

"SFRG, in its comments on the 4 Draft SEIRs in the Court of Appeal cases asserted and continues to assert here that, based on historical growth rates, more office development will take place in Downtown San Francisco by 1990 than is predicted in the SEIR. This is very likely because:

1. The Mayor's Cap ends in three years.
2. The exemption in the cap for projects under 50,000 net square feet will allow for at least 1.9 million square feet of projects this size.
3. There is no hard data to show when the projects on the List will be absorbed.

"This SEIR and the Montgomery Washington SEIR, which is similar to this SEIR, contend that if this happens, the buildings will not be occupied and therefore their construction will have no impact on transit, housing, traffic, etc. (M/W SEIR p.132)

"There is no basis in this SEIR, in a list-based analysis (or in historical data) for this ludicrous presumption. In fact, the only basis for this contention would lie in assuming that the Downtown Plan's economic model for forecasting future office demand is

extremely accurate, and in assuming that the forecasts of the developers who invest substantial sums of money to construct buildings are incorrect.

"To presume that the economic forecast of the consultant who developed the Downtown Plan EIR economic model (which has never been publicly tested, validated or supported), and who has nothing at stake economically, should be believed rather than the market choices of developers, who risk hundreds of millions of dollars on buildings, is neither reasonable nor is it consistent with the general principle that EIRs should err on the conservative side when predicting possible impacts. The presumption that the DCP is so sure of future economic conditions that it can forecast that buildings approved in 1984, 1985, 1986 and 1987 will not be occupied in 1990 is especially absurd when the same DCP refuses to even forecast when projects on the March 22, 1985 List would be built, because that is too speculative! Please include in the FEIR for this Supplemental when the projects on the list will be constructed as well as 'absorbed'.

"In any event, the only basis for the remarkable contention that buildings would be built, but not occupied is the untried, untested Downtown Plan EIR economic forecasting model.

"Is not the Downtown Plan's economic model separate from and irrelevant to the list-based analysis which legitimately assumes that project impacts will occur soon after buildings are constructed?

"As there is no evidence whatsoever to the contrary, the only reasonable assumption in performing the cumulative impact assessment is that the impacts will occur in the same time frame as the project completion. Project sponsors have a strong financial interest in assuring that their office space is rented out. They also have the ability to provide inducements to do this -- for example, by lowering rents. Please discuss the impacts and the likelihood of lower rents in the Final to this Supplemental. (See attached articles)

"It is clearly more reasonable to presume that completed office projects will be occupied in the same time frame as they are built than to presume the opposite and (without any evidence) presume that they will be built and remain empty. Therefore, the impact analyses can only presume that constructed buildings will be occupied within the same

time frame as they are completed. This is certainly consistent with historic trends as well. Please discuss these historic trends.

"Furthermore, in testimony before the Planning, Housing and Development Committee of the San Francisco Board of Supervisors, the Department stated that:

'It is appropriate in an environmental impact report to take a reasonable, but "conservative" approach to forecasts. This means forecasts should incorporate methodologies which cause the results to err on the side of the largest probable expected environmental impact, so that decision makers have that information before them when they make decisions.' (Transportation Effects of the Downtown Plan, submitted to Planning, Housing and Development Committee of the Board of Supervisors, March 5, 1985; page 1)

"SFRG agrees with this criterion as a test of reasonableness. This criterion reasserts the prudence of presuming that approved buildings will be constructed and that constructed buildings will be occupied soon afterward.

"The Court of Appeal decision determined that projects under formal review were probable because of the substantial pre-construction costs to developers. It could likewise be presumed that developers who construct buildings and invest hundreds of millions of dollars will be able to market their office space, using lower rents and other leasing incentives to fill their buildings if need be. The SEIRs must presume that projects on the March 22, 1985 List -- projects which will be built by 1990 at the latest -- will be occupied.

"C. THE SEIR ANALYZES THE IMPACTS OF THE BUILDINGS ON THE MARCH 22, 1985 LIST AS IF BUILD-OUT WILL NOT OCCUR UNTIL THE YEAR 2000.

"Although the SEIR states (incorrectly as Section B of these comments points out) that the impacts of these projects would not take place until 'probably' the mid-1990s, the key tables which show the actual transit impacts, for example, and the analysis and discussion of these impacts assume the transit carrying capacity of the year 2000. The SEIRs' discussion of environmental impacts therefore presumes the impacts the March 22, 1985 List will not occur until 2000.

"For example, Table 3 of the SEIR shows outbound regional transit service levels (Level of Service) and Passenger Per Seat Ratios during the peak PM hour for the buildout of the

March 22, 1985 List. In order to determine transit system Level of Service and Passenger Per Seat Ratios, the EIR presumed year 2000 transit capacity and seats. Therefore, the environmental analyses of Levels of Service and Passenger Per Seat Ratios are based on transit improvements projected to occur by the year 2000, and are identical to the service levels which would be calculated if buildout of the March 22, 1985 List were to occur in the year 2000.

"In its response to SFRG's Board of Permit Appeals brief on the four Court of Appeal cases, which is incorporated by reference as a supplement to these comments, the City states:

'SFRG is correct in its assumption that year 2000 capacities were used as the basis for the transit analysis of the list.'

'The use of year 2000 capacities was made, not from an attempt to hide the impacts of the list, but rather the year 2000 capacities were used to make the results more compatible with the year 2000 Downtown Plan data.' (p.1 ESA Annotations)

"This statement by the City confirms SFRG's claims:

- o The transit analysis does indeed presume year 2000 transit capacities.
- o Although the impacts of the March 22, 1985 List were supposedly presumed to occur in the mid-1990s, this SEIR treats the impacts in the same manner.

Decision makers and the public who look at Table 3 in the SEIRs, which shows the impacts of the employees who will occupy projects on the March 22, 1985 Cumulative List, are given no indication that the analyses presume year 2000 transit levels. The information in the text concerning this chart highlights the confusion. See pages 59-60. It reads:

'Thus, while the column which presents the impacts of the list-based transit demand in relation to year 2000 capacity projects may slightly understate actual impacts, that assessment is considered to be more accurate than the impact assessment using 1990 capacity projections due to the fact that capacity projection are conservative and demand projections are overstated. In addition, it should be noted that the results of the transit impact analyses using the 1990 and year 2000 capacity projection assumptions do not differ significantly.' (underline added)

"This is really insufficient. There should be less demand in 1990 than in 2000 because the SEIR contends that absorption will occur 'probably in the mid-1990's'. Please show how the demand for 1990 is 'overstated'. What are the 'absorption' numbers for the projects on

the Cumulative List for 1990, 1991, 1992, 1993, 1994, etc, etc. There may be no transit data for mid-1990's or 1995, but there should be some data for 'absorption' by this period. This is critical in understanding the impacts of the cumulative development of the List. Please include this data in the Final to this Supplemental.

"Lack of transit data for the year 1995 (really a non-issue, since the impacts of the List would occur by 1990) cannot be legitimately cited as an excuse for the unreasonable analyses. Such a problem could have been handled by interpolating data between the years 1990 and 2000, or by extrapolating the List to the year 2000. Please add this information to the Final EIR for this project. Ultimately, there is no justification for this incorrect treatment of the environmental impacts. Whether premeditated or accidental, the effect of the shoddy analyses was to give transit agencies an extra 10 years to catch up to the demand created by buildings on the List, and to hide the true impacts of the List.

"D. THE ENVIRONMENTAL IMPACT ANALYSES ARE INADEQUATE AND UNREASONABLE BECAUSE THE IMPACTS WILL TAKE PLACE BY 1990 RATHER THAN THE YEAR 2000 AND THE DIFFERENCE OF 10 YEARS IS EXTREMELY SIGNIFICANT IN THE IMPACT ANALYSES.

"The failure of the Department to correctly define the time frame for the impacts of the list make an accurate impact analysis impossible. Without such a correct time frame it is impossible to legitimately compare demand for transit, transportation and housing services to the available spare capacity of those services, and it was therefore impossible to legitimately analyze the need for mitigation. As discussed above, the SEIR arbitrarily and unreasonably treats the impacts of the List as if they will occur in 2000.

"SFRG has commented convincingly that impacts of the List will occur no later than 1990. As previously noted, there is a substantial difference between mitigating the impacts of 20.4 million square feet of office development in 5 years versus 15 years. Transit and transportation agencies, as well as the private sector building new housing, cannot adequately mitigate the effects of these projects within 15 years, according to the Downtown Plan EIR. It is even more unlikely they could even attempt to deal with such problems in 5 years without the imposition of major new mitigation measures.

"By failing to correctly estimate when the projects on the March 22, 1985 List would be built the Department violated the requirements of CEQA. The SEIR gives no indication that the List will be 90 to 100% (or more) constructed by 1990, nor that the analyses of impacts presumed year 2000 transit capacity.

"Thus, presuming that the List will be constructed by 1990 rather than the year 2000 has a significant impact on the environmental impact analyses.

"Data in Table 3 of the SEIR shows Level of Service to be poorer in 1990 than in 2000 for BART Transbay, BART Westbay, MUNI Northwest (beyond level F), MUNI Southwest (beyond level F), MUNI Southeast, and Golden Gate Bus and Ferry. However the actual numbers of riders is the same. If the 'absorption' concept is correct, should not the actual number of riders should be lower in 1990 than 2000?

"This discussion has focused on the transit analysis in the SEIR. However SEIR traffic, transportation and housing impact analyses would likewise be radically different when it is more reasonably assumed that virtually all of the 20.4 million square feet of office development on the March 22, 1985 List will be completed and occupied by 1990 rather than by 2000, or even possibly the mid-1990's.

"The capacity of a transit system in 1990 or 2000 is determined by the transit agencies and depends upon the implementation of capital improvement plans, vehicle acquisition plans and operation and maintenance activities which are subject to state and federal funding sources.

"As the Department has no control over the expansion plans of transit agencies, but merely determines whether employees associated with future San Francisco development could be accommodated by transit agency plans, then whether employees from cumulative development appear in the year 1990 instead of the year 2000 will dramatically effect [sic] the Department's and Commission's determination of the significance of the resulting environmental impacts. This is similarly true for housing, transportation, and other public services." (San Franciscans for Reasonable Growth)

"P.36 Second paragraph. Please include the forecasts of the likely rate of absorption of space in projects already approved, including those approved since the publication of the March 22 List and those projects that will be approved before this Supplemental is certified." (San Franciscans for Reasonable Growth)

"P.37 Third paragraph.

"a. This section discusses the List and 'absorption'. In order to make the List accurate it seems it would be necessary to add a category to the List entitled, 'Completed but not Absorbed'. If this category is not added then there will be no way to measure the absorption vis-a-vis the projected impacts." (San Franciscans for Reasonable Growth)

"P. 18 and 19 Please state when the ten projects mentioned in the fourth paragraph (the additional 2,08,350 [sic] million net square feet) will be absorbed." (San Franciscans for Reasonable Growth)

RESPONSE

This comment is the latest version of an on-going series of comments and responses concerning the time frame for the cumulative impact analysis using the list-based approach (one of the two cumulative analyses in this SEIR). The most similar previous versions of this comment were submitted in testimony and in briefs prepared for the Board of Permit Appeals (February 1985) and the Superior Court for litigation concerning the four Court of Appeals EIRs (briefs dated February 1985 and April 1985). As such, this comment has been responded to on several occasions, specifically in both the "Declaration of Linda Hausrath" and the "Declaration of Fred Dock" before the Board of Permit Appeals (February 27, 1985) and in briefs submitted to the Superior Court by the City Attorney and attorneys for the Real Parties In Interest.

This response summarizes the points made in the earlier documents and focuses on aspects of the comment which were changed for this most recent submittal.

Questions About Absorption And Its Use In Estimating A Time Frame For the List-Based Cumulative Analysis

This comment includes several questions about absorption and how and why it was used to approximate a time frame for the list-based cumulative analysis. The first response in Section A.1 of these responses addresses many of these questions. That response specifically discusses absorption, both generally and as related to the list-based approach. It provides background data and support for the estimate of time frame used in this SEIR. A thorough reading of that response provides a good foundation for the sections which follow.

Summary of SEIR List-Based Approach

The key points regarding absorption and how it factors into the list-based cumulative analysis are the following:

- Under the list-based approach to cumulative analysis, growth is defined by the additional space and employment that would exist in downtown San Francisco as a result of the construction and absorption of the projects on the March 22, 1985 List of Cumulative Office Development. The SEIR focuses on the impacts of that amount of growth. Under the list-based approach, cumulative growth is not defined by any particular year or time frame (such as by the growth expected from 1984 to 2000 as is the case under the Downtown Plan forecast approach).
- Although time frame, per se, is not relevant for defining growth under the list-based approach, it is relevant for identifying the context for impact assessment. (Context in terms of transportation systems, housing market conditions, etc.) The impact analysis should assess future conditions for the time when the growth (to be accommodated by development of projects on the list) would be in evidence.

It is also important to understand that, within the context of impact assessment, it is the approximate time frame that is relevant. It is not necessary to identify the precise year when the effects of cumulative growth would first be in evidence. It has never been the case that growth and the infrastructure needed to accommodate it are "in sync" on an annual basis. The "real world" does not work in such a regular pattern.

- Cumulative impacts, such as those on transportation and housing, arise from the growth of employment. Additional people and their behavioral patterns (not the construction of space, per se) lead to impacts. This is the reason why the estimates of time frame in this SEIR relate to the full occupancy of additional space and not to project construction.
- The term "absorption" refers to the process by which additional building space is leased and occupied by additional business activity and additional employment. This is the process by which cumula-

tive growth occurs. It is the filling or absorption of additional space by additional workers (employment growth) which is the subject of cumulative impact analysis.

Absorption applies to the list-based analysis of cumulative impacts insofar as it is necessary to develop a general time frame for the impact assessment. Estimates of time frame were based on employment growth and the absorption of the additional space in projects on the March 22, 1985 List. Cumulative impacts occur when the amount of additional space that new projects contribute to the overall total supply of space is absorbed by employment growth.

- The time frame for the cumulative analysis using the list-based approach was determined by comparing the amount of employment growth that would be accommodated downtown in the amount of additional space on the List to employment forecasts. These forecasts provide a perspective on overall downtown growth based on analysis of the many factors and trends influencing economic activity and the demand for additional downtown space.

There are two economic studies that have developed recent forecasts of economic growth in downtown San Francisco. They differ in their outlook for downtown growth and provide alternative scenarios for the future. Comparisons were done using each of these analyses and forecasts (see particularly Table C&R 1 and associated text in Section A.1 of responses). The comparison using the Downtown Plan employment forecast indicates that it would take through 1994 for the additional space in projects on the March 22, 1985 List to be absorbed by employment growth. The comparison with ABAG's projection shows that it would take several years after the year 2000 (through 2003) for there to be enough employment growth downtown to absorb the additional space in projects on the List.

The time frame used for the list-based cumulative impact analysis in this SEIR is the one based on the comparison with the Downtown Plan forecast. As explained in the SEIR, enough employment growth to absorb the additional space represented by projects on the March 22, 1985 List is expected to occur during the 1990s and probably by the mid-1990s (see pp. 37-38 of this SEIR). The decision of which time frame to use for the SEIR analysis was conservative in terms of predicting employment growth and impacts.

- In summary, the estimate of time frame for the list-based analysis was made using a reasonable and appropriate approach. The resultant estimate of time frame is conservative for the purposes of assessing cumulative impacts in this SEIR.

Approach Used in the Comment

This comment argues that the list-based analysis does not "use the correct time frame for completion of the projects on the March 22, 1985 List" (underline added), and that it is reasonable to presume that projects on the List will be "constructed by 1990 and occupied by the end of 1990". It asks for an explanation of why these are not reasonable conclusions.

The above conclusions and the work upon which they are based do not provide a reasonable time frame for impact assessment under the list-based approach. This is because the approach does not consider the relevant factors in an appropriate manner. First, the effort devoted to estimating project approvals and construction schedules is not directly relevant since these actions are not the ones which determine when impacts will occur. Second, the approaches used to consider occupancy and absorption are flawed and use inappropriate data. Lastly, there is no consideration given directly to employment growth although the comment appears to agree with the SEIR that employment growth (to absorb the additional space) is the key consideration. Thus, this approach does not provide a reasonable alternative to the time frame used in the SEIR and does not effectively challenge the validity of the SEIR analysis. The following provides further elaboration on the material presented in the comment.

Focus on Project Approvals and Construction. The comment devotes a lot of effort to estimating when projects are likely to be approved and constructed. The implication is that the time frame for construction is the key to estimating the time frame for impact assessment. In fact, it states that when projects are constructed is "extremely germane to the adequacy of the SEIR". As explained above, this SEIR assumes that impacts, such as those on transportation and housing, occur after the additional space is built and fully occupied and employment growth has occurred. Construction and absorption (full occupancy of the additional amount of space) do not always occur in the same year or specific time frame. As evidenced in times of overbuilding with higher than average vacancies, occupancy may lag behind construction. It is important to understand that construction schedules of proposed projects do not determine occupancy, overall absorption, or impact, and are not the same as economic growth.

Following the contention that the time frame for construction is "extremely germane", the comment refers to an earlier request (in the comments on the four Court of Appeals Draft SEIRs) for data on how many projects and square feet of space will be completed each year from 1984. It implies that this data is readily available, and that if the Department provided this data, the issue of time frame would be resolved without further debate. This is not correct. The Responses to Comments in the four Court of Appeals SEIRs already responded to this request, explaining why this "data" cannot be provided for all projects on the List and why this information on project construction is not critical to the list-based cumulative analysis (see, e.g., pp. 131 (bottom) - 133 (top) in Montgomery/Washington SEIR, EE 81.104).

Further, the comment states that the SEIR does not use the correct time frame for completion of projects on the List. The SEIR does not present a time frame for completion of projects on the List, if completion means only the construction of buildings.

Statement Taken Out of Context. Having estimated a time frame for future approvals, the comment then attempts to estimate the timing for occupancy of approved projects. This estimate is based on statements from the four Court of Appeals SEIRs and the Downtown Plan EIR. These statements are taken

out of context and do not provide support for the comment's estimates of the time frame for analysis of space on the List.

In brief, the basic point here (related to both the Downtown Plan EIR and the SEIRs) is that the time periods quoted refer to a typical schedule for an individual building as an example of the shortest time frame for project construction and occupancy. The sections quoted do not relate to cumulative growth (many projects taken together). Further, the sections quoted do not refer to the approach used to estimate the time frame for impact assessment in this SEIR or in the four Court of Appeals SEIRs (as stated incorrectly in the comment).

The comment's approach to estimating time frame goes back to a quote taken out of context from the Downtown Plan EIR in the commenters' earlier brief to the Board of Permit Appeals regarding the four Court of Appeals SEIRs. The errors made in this regard have already been explained. [See section I.2.(c) of L. Hausrath's Declaration to the Board of Permit Appeals.] The current comment persists in using the information incorrectly. Further, a response to the response in L. Hausrath's Declaration is presented in this comment, stating that the Declaration's response discusses the time frame from formal review to project occupancy, while the comment is now concerned with the time from project approval to occupancy. The commenters are referred to the Downtown Plan EIR text upon which this whole discussion is based. On p. IV.B.21, it explains that the schedule from formal review to occupancy typically "requires two years for formal review and planning for construction, three years for construction, and at least one additional year to full occupancy". The time from formal review to occupancy includes the time from approval to occupancy. Thus, the response in the earlier Declaration clearly applies to the use of this information in the current comment.

Regarding this discussion, it is not logical to assume that there is any rule of thumb for estimating the time from project approval to occupancy that would apply to cumulative growth, generally. To some extent, the time frame depends on the amount of space on the list and on the particular real estate market and economic conditions in evidence when the space is constructed. The larger the amount of space relative to the demand from employment growth, the longer the time (and vice versa).

It is possible to use information from the Downtown Plan EIR to estimate the time frame for projects on the March 22, 1985 List. However, the procedure is not as the comment suggests. The appropriate procedure is described in detail in Section A.1 of these responses. This procedure was used for this SEIR and for the four Court of Appeals SEIRs. Contrary to a statement in this comment, the time frame for absorption of projects on the List is the same in this SEIR as in the four Court of Appeals SEIRs (which include the Montgomery/Washington SEIR often cited separately in the comment).

Problems with Second Approach. The comment next presents another means of estimating time frame. Information from another project EIR is presented (Exhibit SFRG-3) for purposes of demonstrating that a three-year estimate of time from project application (not approval this time) to occupancy is reasonable. Review of this information indicates that it does not support any conclusions regarding employment growth and the occupancy of space as relevant to the time frame for assessing cumulative impacts. There are two main problems.

One problem is that the year occupied (as shown in Exhibit SFRG-3) does not necessarily refer to the year of full occupancy. Rather, the date of occupancy refers to the issuance of temporary certificates of occupancy. This does not mean that the space was fully occupied at that time. For example, while the table shows that the 101 California and 353 Sacramento projects were occupied in 1983, other available information indicates that over 200,000 sq. ft. of space in 101 California and about 94,000 sq. ft. in the 353 Sacramento project were still unoccupied and available for lease in November 1984 (San Francisco Business Journal, November 5, 1984, p. 16).

The other problem is that the table only relates to certain projects and not to overall occupancy in the downtown area (which is the relevant consideration regarding employment growth). For example, the new Federal Reserve building is listed as occupied in 1983. However, the activities in the new building moved from the old Federal Reserve building which still remains vacant as of November 1, 1985. (The old building is now part of a proposed mixed-use project which was approved in May 1985.) Since the employees moved from an older building to the new project, occupancy of the new project does not represent additional downtown employment or additional occupancy of down-

town space. The employment growth will occur once the old building is occupied.

The movement of businesses from existing buildings into new projects continually occurs. It is likely that many of the other projects listed in the Exhibit have tenants who vacated existing downtown space to move into the new buildings. Information describing the occupancy of those existing buildings is also required before conclusions can be reached about the time frame for downtown employment growth and its associated impacts.

Following the logic of the comment's approach (to focus on the new buildings for purposes of estimating growth and its impacts), there is an assumption that existing buildings remain fully occupied over time. This is not necessarily the case and certainly does not reflect current conditions with higher than average vacancies for downtown space overall. Data indicate that overall downtown office vacancy rates for both older and recently completed buildings have risen above 10 percent (Coldwell Banker office vacancy index, December 31, 1985, 13.4 percent for Downtown San Francisco). (This is higher than an average vacancy of about five percent.)

The comment asks why the table in Exhibit SFRG-3 was not included in this SEIR as an "aid to decision makers on the issue of absorption". It was not included because it does not describe absorption and was not useful or relevant to the approach in this SEIR.

The Comment's Critique of SEIR Time Frame and Requests for Information

The comment includes statements implying that the time frame estimated in the SEIR is unreasonable. Requests for specific data and information are also included. The statements and requests indicate a lack of understanding of what was done and why.

The SEIR Does Not Presume that Buildings Will Remain Empty. The comment states that it is more reasonable to presume that completed projects will be occupied in the same time frame as they are built than to presume that they will be built and remain empty. This SEIR does not make this presumption.

As explained above, the SEIR list-based analysis assumes that the amount of additional space represented by completed projects will be absorbed (or become fully occupied) according to a time frame based on forecasts of employment growth. This could be in approximately the same time frame as construction, or it could be over a longer time frame.

The approach used in the SEIR indicates that the presumption made in this comment is unreasonable (that completed projects will be occupied in the same time frame as they are built). In the specific way used in this comment, this would presume that vacancy rates do not fluctuate and that short-term cycles of overbuilding do not occur. Recent and current experience indicate that this is not the case. The newspaper articles submitted as exhibits to another comment describe current market conditions. They explain that construction has exceeded absorption such that vacancies are currently at higher than average levels.

In response to comments about the time frame for building construction, the responses in the four Court of Appeals SEIRs explain that if all the space on the list were built by 1990 (without arguing about whether it would be), then there would be more space in the downtown area than is likely to be absorbed by employment growth by 1990 (based on the employment forecasts). Thus, if all the space were built by then, there would be higher than average vacancies. These vacancies could be in the new buildings and/or in the existing buildings. They could represent higher than average vacancies in many different buildings. It is unlikely that some projects will be empty while others would be full as inferred by statements in this comment.

Questions about the Perspective of Economists. The comment questions the analysis of neutral economists because they have nothing at stake (they are "not the ones investing hundreds of millions of dollars"). This seems an asset rather than a detriment. Developers must by nature be optimistic about their project; they must assume that their project will have an advantage over other projects and thus be able to attract tenants. No developer assumes he/she will ever withdraw an application nor hold a partly-empty building for a period of time. However, not all developers are well-founded in their hopes, as shown by vacancies in places like Denver, Houston and even the I-680 Corridor in the East Bay. Neutral analysts with no buildings at stake

are not in competition with other developers and therefore are more free to make a reasonable and objective forecast of future employment and space.

It is also worth noting that while developers all presume there is a market for their space, not all presume this for the time frame espoused in this comment. The complexities of development, the financial climate, vacancy rates, changes in public policy, and the size of the investment in a major office building all combine to make the time frame quite long for receiving substantial returns on investments (rather than the relatively short time frame implied here). Further, expectations about longer-term market conditions may encourage some developers to accept slow initial absorption if longer-term returns are likely to be high.

Questions about the Role of Rents. The comment states that project sponsors have a strong financial interest in assuring that their office space is rented and thus will provide inducements such as lowering rents if space is not leasing. The implication is that these inducements will result in a shorter time frame for absorption than estimated in this SEIR.

It is true that the consequence of a large supply of space relative to demand will be that rents will not increase and may even decline. This will induce the leasing of more space than would otherwise have been leased. For example, the large supply of space currently available in downtown San Francisco has kept rents from increasing and has resulted in inducements that lower the cost of space to attract tenants. However, even with such inducements, vacancies can remain at higher than average levels. It is incorrect to presume that available supply will induce an equivalent amount of demand so that vacancies always remain at average levels, in both the short term as well as over the longer term. For example, currently the additional absorption induced by lower rents has not been large enough to fill (absorb) available space such that vacancies return to average levels. They have remained at higher levels for several years. This process of market adjustment occurs gradually over time.

The role of rents in absorption and in the analysis in this SEIR is explained further in the first response in Section A.1 of these responses to comments.

Requests for Absorption Information on Specific Groups of Projects. This comment includes requests for information describing the absorption of specific projects such as for those projects already approved (separate from those not yet approved) and for ten projects mentioned in the land use section of this SEIR (separate from the rest of the projects on the List). Analysis was not done to provide this type of information. It should be clear based on the preceding response material that the process of estimating absorption involves the comparison between total amounts of growth, not the filling of individual buildings.

It is possible to provide some generalizations based on the understanding that absorption occurs gradually or incrementally over time. It can be expected that the amount of space represented by only the approved projects on the List would be absorbed before the total space in all projects on the List since the former represents a smaller amount than the latter. It is also likely that space in approved projects constructed over the next few years would be absorbed before space in projects that are not yet approved and which would not be constructed for several more years.

It should also be understood that the process of estimating the time frame for absorption is not done on a year-by-year basis. The process takes a longer-term perspective and uses economic forecasts provided for certain benchmark years (such as 1990 or 2000). The process is approximate. Thus, the request to add a category to the List entitled, "completed but not absorbed" cannot be satisfied. This request is not appropriate for the purpose of the List in this SEIR. The List identifies the amount of growth that is analyzed, i.e. the amount of space absorbed. The analysis is done for the total amount. Thus, at the time of the analysis, the amount of space completed but not yet absorbed would be zero. Alternatively, if the purpose of such a category were to account for future absorption as it occurs over time, the List would have to be expanded to include every building in the greater downtown area.

Question about the Recently Adopted Cap. The recently adopted cap on office building approvals could result in less development than would otherwise occur during a similar time period without the cap. If slower

growth results, the analysis in this SEIR presents a conservative assessment of impacts, that is, it shows greater impact than would occur if the amount of space on the List were not absorbed until the late 1990s, beyond the time frame estimated in this SEIR. If the cap were to lapse after three years, it is possible that the longer-term impacts identified in the SEIR would not be substantially different.

In general, there is no reason to assume that a cap on office development would result in more growth than would occur without such a cap. Thus, a policy that limits growth would either have no effect on the absorption estimate used in this analysis or it would result in slower rates of development than estimated (in which case the SEIR assessment of impacts would be conservative).

Benchmark Years for Impact Analysis

This section of the response addresses the contention that the SEIR "presumes the impacts of the March 22, 1985 List will not occur until 2000." The comment claims that the time frame for absorption and the time frame for analysis of impacts are mis-matched and that the SEIR presents a significant underestimate of impacts. The commenters focus on the transportation analysis and use this section of the SEIR for their examples. The following discussion highlights several places where statements are simply wrong and provides further explanation of the relationship between the time frame for absorption of the amount of space in projects on the List and the time frame for impact assessment.

First, the SEIRs clearly do not presume, as repeatedly alleged in this comment, that the impacts of the growth represented by projects on the List would not occur until 2000. The early-to-mid 1990s was determined to be the approximate time when the additional space would be absorbed. Impacts would occur over time, as the additional space is gradually absorbed. The magnitude of the total cumulative impact is measured when all the growth has occurred, i.e. by the mid-1990s. The period from 1984 through the mid-1990s is the time frame "presumed" in the impact analysis. (See the preceding section of this response as well as the responses in Section A.1 above concerning absorption.)

Use of Table 3 from the SEIR as an example of the contention that impacts are only analyzed for the year 2000 is definitely not convincing evidence. It is true that this is a key table describing the results of the impact analysis for transit. The table shows Level of Service and Passenger per Seat ratios for the transit demand associated with the List compared to both 1990 and 2000 capacities. The SEIR text explains that the comparison of the list-based demand to two capacity scenarios is "intended to describe the foreseeable range of transit impacts under the list-based analysis." SEIR, p. 59.) Presentation of both 1990 and 2000 assessments allows the public and decision-makers to draw conclusions regarding the interim years (when the total growth represented by the List is expected to occur). To reinforce this process, the first sentence of the first paragraph on p. 60 of the SEIR is deleted, and the reader is left to draw his/her own conclusions regarding the significance of the difference.

Such mis-statements regarding the alleged presumption that impacts would not occur until 2000 demonstrate a lack of understanding of the use and purpose of an approximate time frame in the list-based impact assessment. The List represents an amount of growth that is constant throughout the cumulative impact assessment. Estimating the time it is expected to take to absorb the additional space represented by projects on the List enables the comparison to future housing, transportation, air quality and energy parameters that is the basis for the cumulative impact assessments. (The procedure for estimating this time frame is described in the first response in Section A.1.)

The time frame thus estimated is approximate. Similarly, the future parameters used in the impact analysis, such as the 1990 and 2000 transit capacities described above, are approximate. This is the only adequate and reasonable approach.

The cumulative impact analyses cannot presume to describe impacts and the timing of impacts with any greater degree of precision. The benchmark analysis years presented in the SEIR are appropriate, and it is presumed that the public and the decision-makers understand the necessarily approximate nature of any quantifications. Thus, it follows that the claim that impact data for each specific year from 1990 on "is critical in understanding the impacts of cumulative development of the List" is spurious. Year-by-year

projections would not be any more accurate and would imply a degree of precision that it is not possible to obtain in cumulative impact analysis of downtown growth. Moreover, it would not be easier to understand the description of the results, and the overall conclusions would be no different.

Specifically regarding the transportation analysis, the use of capacity estimates for the years 1990 and 2000 provides a means of bracketing the expected end-point for the growth represented by projects on the List (the mid 1990s). The parameters used to estimate capacity in the two benchmark years were reasonable and conservative.

Improvements that were determined to be somewhat speculative were not included in assumed capacities. For example, neither the proposed Muni E and F lines nor the Muni turnaround at the foot of Market Street are included in the future capacity parameters. BART systems extensions, including that to the San Francisco Airport, are also not included. The few transit improvements that were assumed, such as the Daly City tail track (sometimes referred to as the Colma Turnaround) and the Oakland wye BART improvements, are already underway.

Generally, only the vehicle acquisition portions of the 5-Year Plans were assumed for most transit agencies. That is, the entirety of the 5-Year Plans was not assumed, and even the vehicle acquisition portions were not assumed to be implemented until 1990, although the 5-Year Plans generally cover a period from about 1982-83 - 1988. For some agencies, no further capacity increases are projected for 1990 - 2000 (A-C Transit, CalTrain and the ferries). For others, estimates were made using agencies' longer-range plans based on working papers prepared as background for the 5-Year Plans and on conversations with agencies' staff members. (See DTP EIR Appendix J., pp. J.25-26.)

The use of two different capacity parameters creates the results described in the text in terms of overstated or understated impacts. Since the List by definition represents the same amount of growth (no matter to which year's capacity parameter it is compared) and the expected time for absorption of the additional space in projects on the List was determined to be the mid-1990s, then comparing list-based demand to 1990 capacities is to overstate

the impacts and comparing list-based demand to 2000 capacities is to understate the impacts. In the former comparison, the analysis treats the entire mid-1990s demand as if it occurred in 1990, while in the latter comparison, the analysis treats the mid-1990s demand as if no more were expected through the year 2000.

The statement that this method of analysis gives "transit agencies 10 years to catch up to the demand created by buildings on the List" is wrong. At most, the comparison of mid-1990s demand to 2000 capacities implies only a five-year discrepancy. This is irrelevant to the adequacy of the SEIR, however, because the impacts assuming 1990 capacities are also shown. Comparison of the mid-1990s demand to 1990 capacities would put transit agencies five years ahead of the demand "created".

The suggestion that transit capacities for the year 1995 could be readily derived by interpolating the data between the years 1990 and 2000 is unrealistic. Even if it were possible to manipulate the capacity assumptions in this way (recall that in some cases no increases in capacity beyond those in place by 1990 were assumed), it would not be appropriate to assume that the capacity added from 1990 to 2000 would be added evenly over the period. Capacity is added in "lumps" as improvements are completed.

In the same breath, the commenters repeat their often-raised contention that the List could be extrapolated to the year 2000. To do so, however, would stray from the basic definition of the list-based approach, as reiterated by the Court of Appeal in recent litigation concerning four other SEIRs. Moreover, until new projects are proposed, adding development to the List would require a forecast approach similar to that already provided in the Downtown Plan forecast approach to cumulative impact assessment, which is presented in this SEIR as an alternative to the list-based approach.

The commenters acknowledge the use of the 1990 analysis for transit capacities elsewhere in the comment when they question why the list-based demand is the same for both 1990 and 2000. By definition, the list-based analysis, as used in this EIR and past EIRs, has only one demand projection. The estimate of the time frame for when all of this demand would be apparent (through absorption of the space represented by projects on the List) pro-

vides a basis for bracketing this demand projection with parameters associated with benchmark years. In this approach, the reader can review each estimate of impacts, making determinations for the years in-between and for how the impacts might vary depending on when the space was actually absorbed. Just as the March 22, 1985 List cannot be extended beyond the mid-1990s time frame until there are more projects to add to the List, the list-based demand is not presumed to be less, just because the year 1990 is chosen for an analysis year.

Similar points can be made regarding the housing impact analysis using the list-based approach. The housing impact analysis is not tied to one particular year. It is important to know the approximate time frame (such as "during the 1990s") for comparison to the appropriate citywide and regional labor force, employment, and housing parameters. Whether the total growth first occurs in 1993 or 1997, for example, would make no significant difference in the conclusions.

In the SEIR housing impact analysis, the growth represented by the List is compared to certain parameters in benchmark years. For example, Table 9 (SEIR, p. 90) compares future downtown workers (assuming that all projects on the List are built and occupied) to the employed population of the region as forecast for 2000 by the Association of Bay Area Governments. Since the employment growth accommodated by space in projects on the List is expected to occur in the 1990s, note /b/ in Table 9 explains that there would be more development (not currently on the List) and thus more workers in the downtown area by the year 2000. It goes on to explain that the percentages of the regional employed population would also be higher than shown.

It is important to understand that such comparisons do not indicate that impacts would not take place until 2000. The comparison in Table 9 is not the sole basis for estimating impacts. The table simply provides a description of future conditions to the extent they can be quantified.

Summary

The basic allegation in this set of comments is that by failing to define the correct time frame for growth under the list-based analysis, the SEIR

does not describe the true severity and significance of the cumulative impacts. The preceding sections of this response and the first response in Section A.1 describe the rationale and background for determining the time frame for growth using the list-based approach. The analysis that was done clearly indicates that some thought was put into the determination of the time frame. The estimate of the mid-1990s was certainly not an arbitrary decision.

No convincing evidence has been presented that the impacts of the List will occur "no later than 1990." The first sections of this response present both an overview and specifics as to the flaws in the approaches used to estimate time frame. Most importantly, the commenters refuse to acknowledge the central role of employment growth in any such estimate of the timing of cumulative impacts. These responses to comments are only the latest presentation of carefully reasoned, technical arguments to support what was done for this SEIR and in other similar SEIRs. (See particularly documents in Board of Permits Appeals Record for One Sansome, Montgomery Washington Tower, 101 Mission, and 160 Spear SEIRs, and reports and testimony before the PH&D Committee of the Board of Supervisors.)

The commenters summarize their challenge to the SEIR by repeating the claim that cumulative impacts under the list-based approach are presumed to occur in 2000. The preceding section of this response points out again how the time frame for impact assessment of the mid-1990s fits within benchmark parameters of 1990 and 2000. Moreover, while the commenters claim this inadequacy persists through all sections of the impact analysis, the only detail they present to support this contention is from the transportation analysis. That detail has been demonstrated (above) to be lacking in substance: the "key table" (Table 3 in the SEIR) clearly presents comparisons to both 1990 and 2000 parameters.

In support of their claim that the SEIR impact analyses are "radically wrong", the commenters present a hypothetical case of conditions on the Bay Bridge intended to dramatize the severity of potential impacts. The analogy of a traffic jam four lanes wide and eight miles long is apparently based on the physical space necessary to store 9,000 vehicles simultaneously. In the case of the Bay Bridge, such a condition could exist only if the bridge were to be closed to traffic for an hour. Under conditions where traffic flows, the Bay

Bridge can process vehicles at a flow rate of 9,000 vehicles per hour or 2.5 vehicles per second and thus, the situation described (a demand of 18,000 vehicles in a one-hour period) would not result in 9,000 vehicles parked on the freeway. The lengths of the queues of vehicles that would develop both on the freeway and at the ramps in such a situation would depend on the arrival rate of individual vehicles at the bridge approaches.

Finally, the difference in time frame (between 1990 and the mid-1990s) is not "extremely significant." This is a difference of only about five years (not 10 years) in an analysis that can provide only approximate assessments at best. Given the economic and political uncertainties which affect the actual timing of growth and its impacts, a difference of five years is relatively small.

3. Downtown Plan EIR Forecast Approach/Analysis of Non-C-3 Growth

COMMENT

"E. THE ANALYSES AND FINDINGS OF THE DOWNTOWN EIR CANNOT BE INCORPORATED BY REFERENCE IN THIS SEIR BECAUSE THE GEOGRAPHIC AREA ANALYZED IS NOT THE SAME AND THE LEVEL OF ANALYSIS OF THE NON-C-3 AREA IS INADEQUATE.

"The SEIR does not analyze the cumulative impacts of probable future projects in the vicinity of the project and therefore does not meet the requirements of CEQA. The analysis of cumulative project impacts did not sufficiently include the impacts of projects in the Downtown San Francisco non-C-3 area to meet the requirements of this project EIR.

"The SEIR incorporates many tables and analyses from the Downtown Plan EIR. That data fails to adequately analyze impacts of projects which are in the non-C-3 area and which are on the March 22, 1985 List. To the extent that data is relied upon in this SEIR they are automatically rendered inadequate. CEQA requires the City to give an equally detailed analysis of the impacts of all Downtown office space on the Department's March 22, 1985 List -- not just a detailed analysis of C-3 area employment and minimal analysis of non-C-3 area employment.

"F. THE COURT OF APPEAL DETERMINED THAT THE EIRS FOR DOWNTOWN SAN FRANCISCO OFFICE PROJECTS MUST ANALYZE THE CUMULATIVE IMPACTS OF PROJECTS THROUGHOUT THE DOWNTOWN AREA.

"The Court of Appeal (SFRG vs. City and County of San Francisco (1984) 151 Cal.App. 3d 61), found that an EIR is sufficient to meet the requirements of CEQA as long as the cumulative impacts of all projects in the vicinity of the proposed project are analyzed. The Court ruled that an EIR is inadequate if it arbitrarily defines a 'vicinity' of a few blocks radius from a proposed project. The 'vicinity' for Downtown San Francisco office development was determined to be the 'Downtown' San Francisco area where office buildings all depend on the same transportation and transit systems. The Department's 'lists' show all downtown projects, whether in the C-3 zoned area or in the Downtown area adjacent to the C-3 area. The Supplemental EIR must analyze the cumulative impacts of all of the projects on this list, whether or not they are in the C-3 area.

"G. FUTURE DEVELOPMENT IN THE NON-C-3 AREA OF DOWNTOWN WILL BE SIGNIFICANT AND HAS IMPACTS SIMILAR TO C-3 DEVELOPMENT, THUS THE CUMULATIVE IMPACTS ANALYSIS OF THIS DEVELOPMENT MUST BE AS DETAILED AS THAT OF THE C-3 DEVELOPMENT

Downtown San Francisco non-C-3 office development projects adjacent to the C-3 area have project impacts similar to C-3 projects in terms of employment, transit, traffic, transportation and housing. According to the Downtown Plan EIR only 12% of the 29.5 million square feet of office development in San Francisco between 1965 and 1981 occurred in the non-C-3 area. (DTP EIR p. IV.B.3) That document also states that:

'Citywide employment is forecast to increase between 1981 and 2000 under the policies of the DTP. Just over half of this growth would occur in the C-3 district. The balance is likely to be divided about equally between the areas surrounding the C-3 (south to China Basin including Mission Bay, Civic Center, Northern Waterfront and the Washington/Broadway Special Use District) and the rest of the City.' (Downtown Plan EIR IV.C.47)

"This means there will be approximately 92,000 additional C-3 area employees from 1984 through 2000 and 92,000 additional non-C-3 area employees in San Francisco. (DTP EIR Table IV.C.15 p. IV.C.41) 46,000 of the non-C-3 area employees will be in the Downtown San Francisco non-C-3 area which the Court determined is part of the Downtown area.

"The Downtown Plan EIR expects that the areas of San Francisco adjacent to the C-3, particularly to the south of the C-3 District, will experience substantially more growth in employment than in the past.

"The Comments and Responses for the Montgomery/Washington SEIR (EE #81.104E) stresses the significance of non-C-3 development in the statement that:

'As a result of this pattern (of development shifting to the non-C-3 area), comparisons which show lower C-3 district development in the future as compared to total citywide development in the past do not necessarily indicate that future, citywide development would be lower than in the past. As explained in the Downtown Plan EIR, it is expected that there would be proportionately more development in City areas outside the C-3 district in the future. The extent of this shift also depends on the zoning policies currently under review for the areas to the south of the C-3 district.' Montgomery/Washington SEIR p. 126

"This is a revealing statement. It says that overall citywide development (which has been over 3 million square feet per year over the past seven years) may not be lower than in the past, but that development in the non-C-3 area will increase above historical levels.

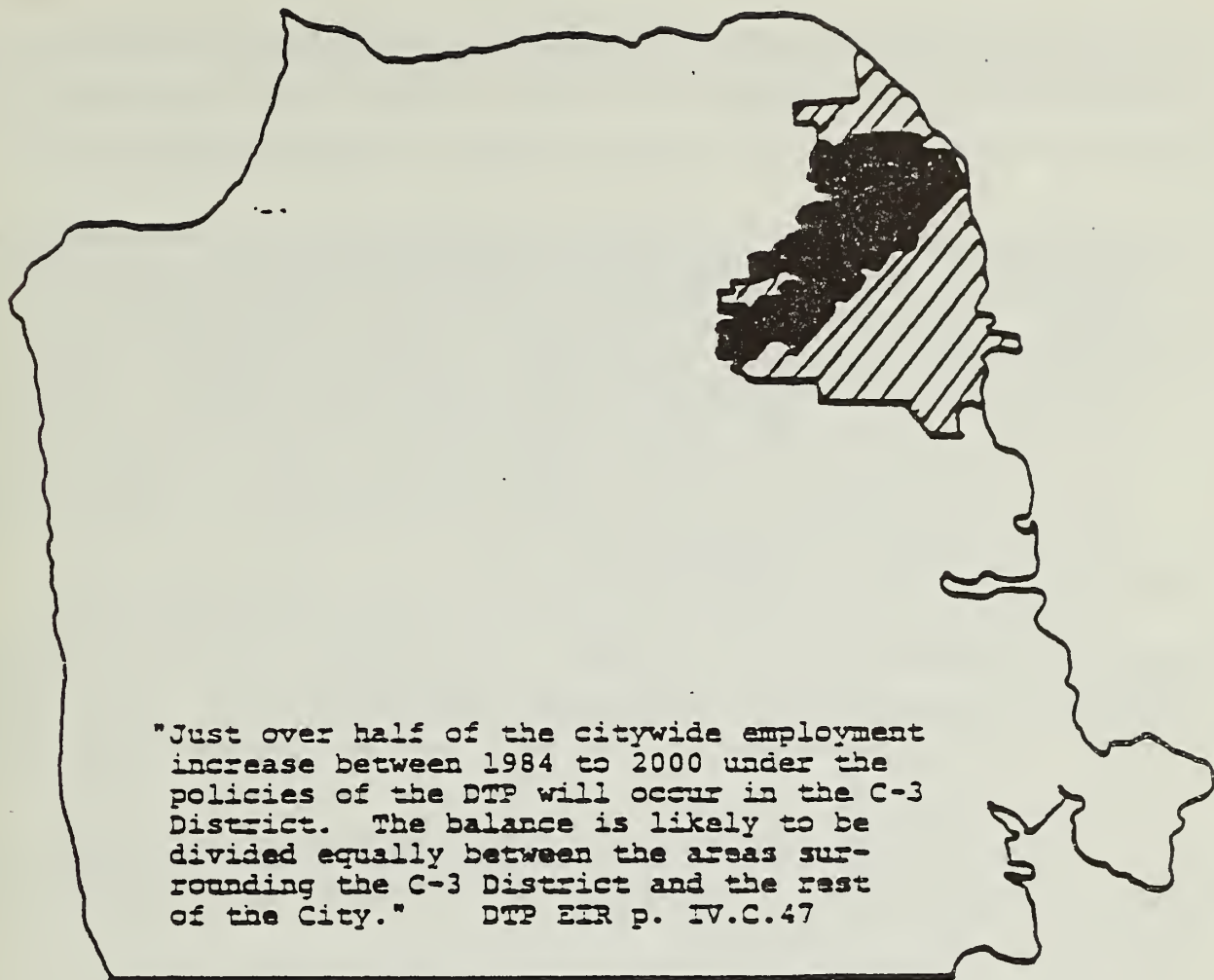
"It is therefore clear that the 1145 Market Street SEIR must analyze in equal detail the impacts of both C-3 and non-C-3 projects. The SEIR includes the March 22, 1985 Cumulative List in Appendix B. This Table shows that 33% of the projects are in the non-C-3 area immediately adjacent to the C-3 district and 67% of the development on the March 22, 1985 list is in the C-3 area. It is clear that the SEIR must analyze the cumulative impacts of all probable future development. To the extent that the Downtown Plan EIR tables and conclusions are used in the SEIRs to guide decision-making, the SEIR should ensure that the tables adequately include non-C-3 area impacts. Please include them in the Final EIR for this project.

"H. THE DOWNTOWN PLAN EIR DID NOT INTEND TO PERFORM A DETAILED ANALYSIS OF THE IMPACTS OF NON-C-3 OFFICE DEVELOPMENT

"The purpose of the Downtown Plan EIR was to evaluate the impact of land use and employment changes in the C-3 zoned areas of San Francisco. That EIR states misleadingly that the C-3 District transportation and transit analyses contain a non-C-3 component developed on the basis of historical trends. (DTP Plan EIR p. IV.E.2) SFRG does not believe the use of historical trends in the non-C-3 area adequately accounts for the employment that will occur there in the near future. This is especially true when the Downtown Plan EIR notes that non-C-3 area development will be far greater in the future than it has been historically. (See citation above).

"There are actually three non-C-3 areas in the Downtown Plan EIR as shown by SFRG-6.

1. There is the non-C-3 area of Downtown San Francisco immediately adjacent to the C-3. This area uses the same transportation and transit network as the C-3 District during the peak period commute hours. There is a substantial amount of office space planned for this area in the immediate future.
2. There is the non-C-3 area of San Francisco that is not part of Downtown.
3. There is the regional non-C-3 area that does not include San Francisco but whose effects are determined at regional screenlines.



GEOGRAPHIC AREA



C-3 AREA OF DOWNTOWN S.F. THE AREA WHERE MOST OFFICE SPACE PRESENTLY EXISTS AND WHERE FUTURE OFFICE SPACE IS PLANNED. 92,000 NEW EMPLOYEES WILL WORK HERE BY 2000.



NON-C-3 AREA OF DOWNTOWN SF. THE AREA WHERE MAJOR OFFICE SPACE IS PLANNED FOR FUTURE AND WHICH USES THE SAME TRANSPORTATION/TRANSIT NETWORK AS THE C-3 OF DOWNTOWN. 46,000 NEW EMPLOYEES WILL WORK HERE BY 2000.



NON-C-3 AREA OF SF. NOT PART OF THE DOWNTOWN OFFICE DISTRICT. THIS AREA WILL HAVE 46,000 NEW EMPLOYEES BY 2000.

"The Downtown Plan EIR does not adequately take the approximately 46,000 new jobs in Downtown San Francisco adjacent to but not in the C-3 zone into account when conducting a transportation and transit impact analysis. The Downtown Plan EIR states:

'The travel analysis takes a regional perspective on the use of the transportation systems serving Downtown. Non-C-3 travel growth at the regional screenlines was projected on the basis of historic trends in growth at the regional screenlines. Non-C-3 travel is defined as travel that has neither an origin nor a destination in the C-3 District. Thus, non-C-3 travel includes travel to and from other parts of downtown and trips through San Francisco from other parts of the region. Employment projections or estimates of development potential based on plans or lists of projects are not specifically used in the non-C-3 travel analysis. Because analysis of non-C-3 travel has been conducted for discrete locations (i.e. the regional screenlines) there is no direct relationship between non-C-3 land use, employment, or housing and the non-C-3 travel analysis.' (DTP EIR C&R p. E.16)

"This lack of an adequate analysis for the non-C-3 area of Downtown San Francisco makes the cumulative impact analyses in the Downtown Plan EIR fatally flawed. These analyses are flawed because they underestimate the impacts of increased employment projected by the Downtown Plan EIR for the entire Downtown area by using historical trends in the non-C-3 area as the basis for impact analyses, even though the Downtown Plan EIR notes employment growth and office development in the non-C-3 area of Downtown San Francisco will exceed historical trends.

"The Downtown Plan EIR explicitly states that it did not perform and it did not intend to perform the type of detailed environmental impact analysis in the non-C-3 area that it performed in the C-3 area.

'The description of impacts on growth in other City areas is qualitative and focuses on the differences that would result from a choice of C-3 district policies. Many of the comments request forecasts of total future space and employment in other City areas similar to those developed for the C-3 district. Comparable forecasts do not exist. They could not be done without further data gathering and analysis. . .' (DTP EIR C&R p. B.42)

"The last sentence shows that the Department did not, in the Downtown Plan EIR, attempt to analyze non-C-3 impacts at a level of detail commensurate with that of the C-3 district.

"In a declaration (incorporated by reference here) by Linda Hausrath, the Downtown Plan EIR economic consultant in SFRG vs. City and County of San Francisco (case 791326) she states that:

'SFRG correctly states in Subsection III.B, that the Downtown Plan EIR did not intend to perform a detailed analysis of the impacts of non-C-3 office development. The Downtown Plan EIR was never intended as an analysis of the impacts of citywide growth or of growth that might occur outside the C-3. Rather, the Downtown Plan EIR analyzes and describes the implications (emphasis not added) of C-3 District growth for development patterns and rates of growth of the non-C-3 area.' (p. 28 L. Hausrath Declaration, February 27, 1985)

"SFRG questions how this incomplete analysis can be used for this SEIR.

"I. THE DOWNTOWN PLAN EIR UNDERESTIMATES TOTAL ADDITIONAL DOWNTOWN DEVELOPMENT BETWEEN 1984 AND 2000 BY AT LEAST 50%.

"By failing to include the Downtown San Francisco non-C-3 area in its environmental impact analyses, the City underestimated by 50% the amount of development downtown and its impacts.

"The Department presented to the Planning, Housing and Development Committee of the Board of Supervisors on March 5, 1985 (this information is also dated March 19, 1985 and is incorporated by reference here) information which confirms SFRG's contention that the use of historical trends in the non-C-3 area of Downtown San Francisco underestimates the transit impacts which will result from future non-C-3 area employment. SFRG-7 is Figure 8 from the Department's testimony.

"This figure shows the Downtown Plan EIR forecast for peak period BART Transbay transit riders. As can be seen from this figure, the Downtown Plan EIR projects approximately 18,500 additional BART transbay riders. This figure also shows that approximately 17,000 of these riders will come from the C-3 area and 1,500 will be from the non-C-3 area. Thus the 92,000 additional C-3 workers will result in 17,000 riders, while the 92,000 non-C-3 workers will result in only 1,500 additional peak period riders. The ratio of additional C-3 to non-C-3 trips is eleven to one.

"SFRG-8 is Figure 13 from this DCP testimony. This figure shows the Downtown Plan EIR forecast for peak period Caltrain riders. The Caltrain Terminal at 4th and Townsend

PEAK PERIOD TRANSIT RIDERS ON BART TRANSBAY

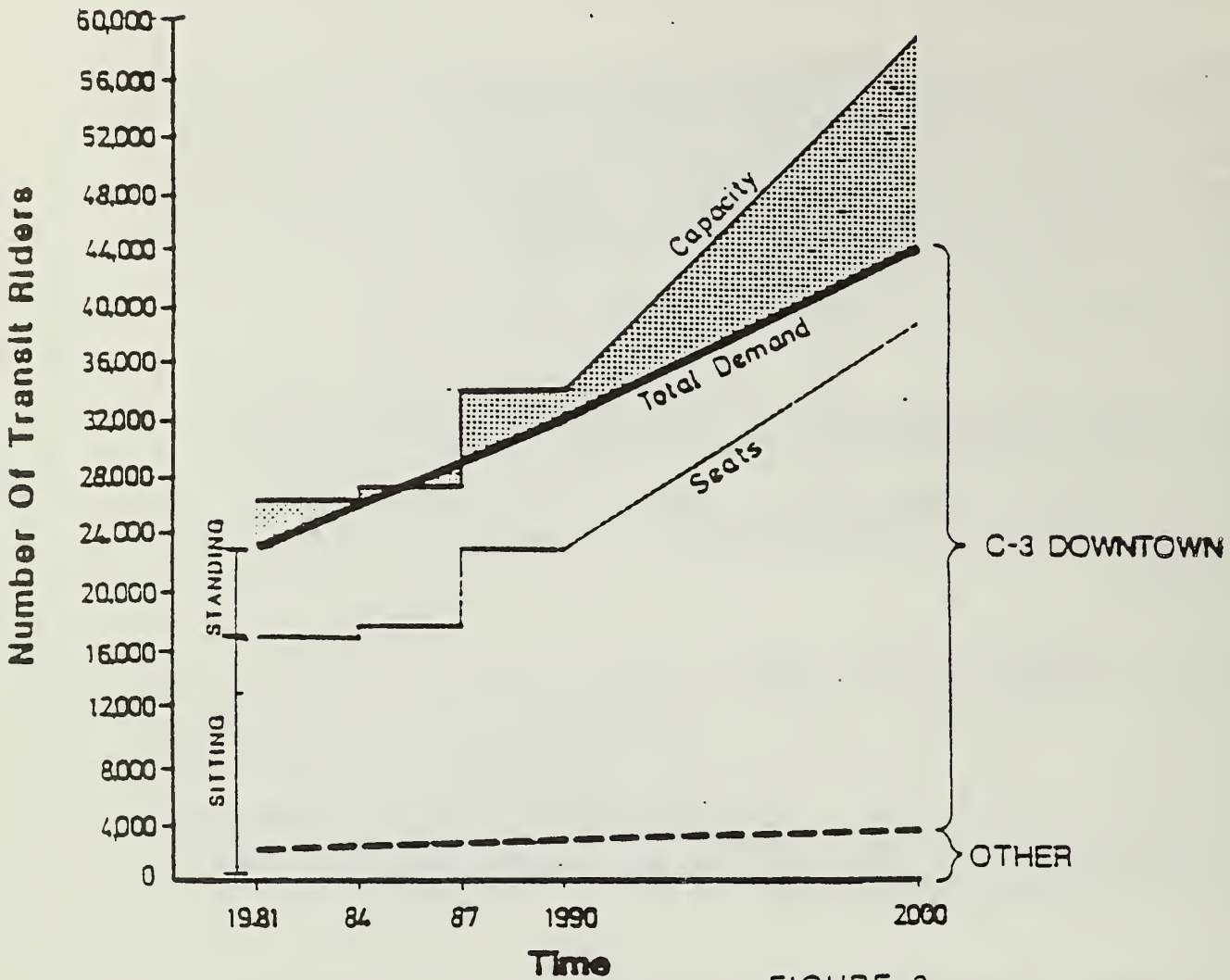


FIGURE 8

PEAK PERIOD TRANSIT RIDERS ON CALTRAIN

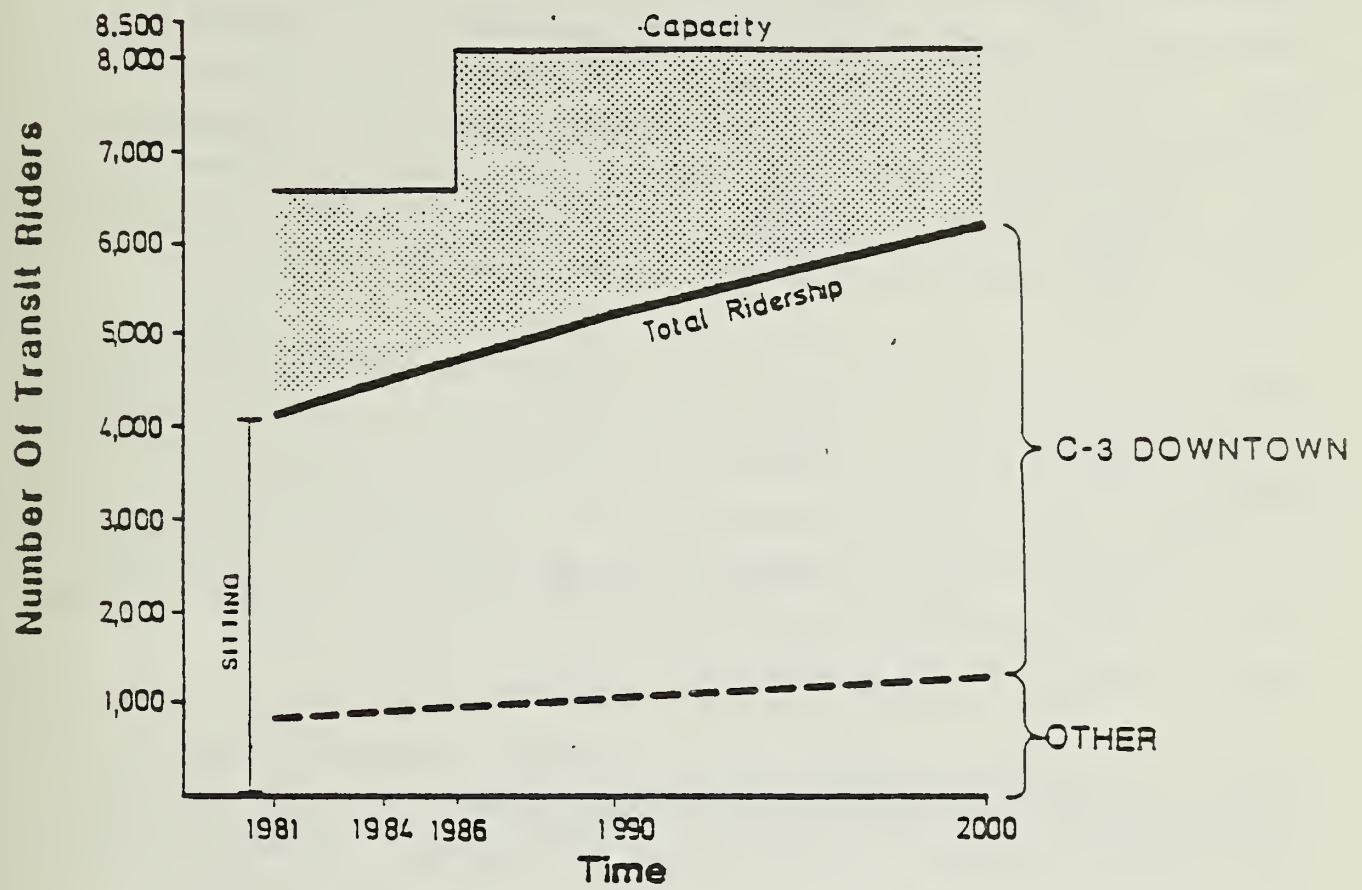


FIGURE 13

Streets is in the heart of the South of Market Downtown San Francisco non-C-3 area. This is the area where much of the new Downtown San Francisco non-C-3 employment (approximately 46,000 new employees) will occur in the next 16 years. As can be seen from the Figure, the Downtown Plan EIR projects approximately 1,600 additional Caltrain riders. This Figure shows that approximately 1,400 of these riders will be from the C-3 area and 200 will be from the non-C-3 area. Thus the 92,000 additional C-3 workers (who have to walk 20 minutes or take transit to reach the Caltrain terminal) will result in 1,400 additional riders, while the 92,000 (46,000 of which are in the non-C-3 area near the Caltrain terminal) workers will result in 200 riders during the peak period.

"SFRG-9 summarizes the information for the C-3/non-C-3 ridership Figures in the March 5, 1985 Department testimony. MUNI is not included in this Table because the Downtown Plan EIR states that it is not possible to add the MUNI corridor ridership numbers to get total ridership numbers. This table shows that of the 31,700 additional peak period riders on the transit systems listed, the Downtown Plan EIR forecasts 28,150 riders will come from the C-3 area and 3,500 riders will come from the non-C-3 area. Eight times as many riders will come from the C-3 as from the non-C-3 area.

"How can the Downtown Plan EIR project that the 92,000 additional C-3 employees will result in 28,000 peak period transit riders on these systems, while the 92,000 additional non-C-3 employees, 46,000 of which will be the Downtown area will result in only 3,500 transit riders? This error results from the use of historical trends in the non-C-3 area and drastically underestimates the number of transit riders for this area.

"These Department figures confirm SFRG's main contention:

That the Downtown Plan EIR underestimates the total impacts of future San Francisco employment by underestimating the impacts of the 46,000 additional Downtown non-C-3 employees forecast by the EIR itself.

"The ridership from the non-C-3 area of Downtown San Francisco should be approximately one half that of the C-3 area because it will contain approximately one half as many new employees who will commute during the peak period. In addition, the 46,000 additional non-C-3 riders who are not in the Downtown area, will contribute some additional increment of transit ridership to these systems.

INCREASE IN C-3 AND NON-C-3 TRANSIT RIDERSHIP

	<u>C-3</u>	<u>NON-C-3</u>	<u>TOTAL</u>
BART TRANSBAY	17,000	1,500	18,500
BART DALY CITY	2,700	600	3,300
AC TRANSIT	2,300	700	3,000
G.G. BUS	4,200	400	4,600
G.G. FERRY	550	150	700
CALTRAIN	<u>1,400</u>	<u>200</u>	<u>1,600</u>
TOTAL	28,150	3,550	31,700

C-3 IS C-3 PEAK PERIOD RIDERSHIP = 64,000 NEW WORKERS

NON-C-3 IS NON-C-3 PEAK PERIOD RIDERSHIP = 64,000 NEW WORKERS

Source: "Transportation Effects of the Downtown Plan"

Department of City Planning - March 5, 1985.

Note: These transit systems were picked for this table because their screenlines were the same as the C-3 boundard. MUNI could not be included because the Downtown Plan EIR states that one cannot add the corridor ridership numbers to get total ridership numbers.

"The SEIR references Appendix J of the Downtown Plan EIR for the discussion of how the non-C-3 area was incorporated into travel and transit projections. The following quotes are from Appendix J.

1. Golden Gate and Bay Bridges: 'For vehicular traffic peak hour non-C-3 travel for future years was increased based on historic trends for each roadway. For the Golden Gate and Bay Bridges, no growth in non-C-3 vehicle trips was assumed.' (p. J. 22 DTP EIR)
2. BART Transbay Peak Hour Trips: 'The non-C-3 travel demand was estimated to be about 1000 trips.' (p. J.23 DTP EIR)

"Question. If non-C-3 employment increases at the historical citywide annual rate of 2.4 percent (see p. J.25 DTP EIR), the 1984 - 2000 increase would be 34 percent. Therefore, does not Appendix J presume 340 additional non-C-3 Transbay BART riders for this period?

3. Golden Gate, SamTrans, and Caltrain: 'Because of the location of transit routes and stops and the observed characteristics of ridership on Golden Gate Transit, SamTrans, and Caltrain, little non-C-3 District ridership was assumed.' (p.J.23 DTP EIR).

"These quotes confirm SFRG's belief that little or no non-C-3 travel was assumed in the Downtown Plan EIR transit and transportation analysis. (Zero non-C-3 additional riders was assumed for the bridges.) The SEIR makes the same assumption.

"J. THE SEIR PRESUMES THE DOWNTOWN PLAN TRANSPORTATION AND TRANSIT IMPACT ANALYSES ARE SUFFICIENTLY DETAILED, ACCURATE AND OBJECTIVE TO BE USED TO DESCRIBE IMPACTS OF PROJECTS IN THE NON-C-3 AREA

"It is clear from the above discussion the non-C-3 impact analyses were not based on future employment or projects in the non-C-3 area immediately adjacent to the C-3 area, but rather on historical trends over the entire Bay area. However, although the Downtown Plan EIR itself notes the limits of the non-C-3 analysis, that same document proclaims that its detailed C-3 transportation analyses adequately include the impacts of new employment in the non-C-3 area.

"The Downtown Plan EIR therefore contains a very critical contradiction. On the one hand it states that its C-3 area economic model contains a non-C-3 component based on historical trends at regional screenlines, and not based on specific land use or employment

projections. On the other hand, it then has tables which contain very specific downtown San Francisco P.M. Peak transit ridership calculations, intersection analyses, San Francisco freeway on-ramp loadings, etc., and states the figures in these tables include the impacts of projected non-C-3 San Francisco employment.

"This SEIR likewise presumes that the land use and employment changes that will occur in the non-C-3 area immediately adjacent to the C-3 area have been adequately analyzed in sufficient detail by the Downtown Plan EIR to be used for comparative purposes with a list-based approach methodology which is for the Downtown C-3 and non-C-3 area. It is for this reason that they believe the Downtown Plan EIR conclusions are valuable for decision-makers who are approving both C-3 and non-C-3 area projects.

"On one hand the SEIR states the non-C-3 analysis indicated by Appendix J is not based on land use or employment changes in the future, but on projection of historical or regional transit and transportation trends. On the other hand, the SEIR uses the Downtown Plan EIR assumptions and conclusions as superior to the list-based approach which includes both C-3 and non-C-3 area projects.

"The SEIR graphically demonstrates that the non-C-3 components in the Downtown Plan EIR travel/transit analyses is negligible. SFRG-10 displays the information in the SEIR Tables 2 and 3. This table demonstrates that there is little non-C-3 transit demand assumed. For BART Transbay, BART Westbay, Caltrain, Golden Gate Bus and Golden Gate Ferry, the C-3 only Outbound PM Peak Hour Travel Demand (Table 2) is no different than the total C-3 and non-C-3 Peak Hour Travel Demand (Table 3).

"The Final EIR for this project should explain why there is apparently no non-C-3 component of transit demand for these systems. The Department should also explain why MUNI Southwest and Southeast lines have so many non-C-3 travelers.

"K. THE DOWNTOWN EIR TRANSIT AND TRANSPORTATION ANALYSES CANNOT BE USED IN THE SEIR TO SHOW THE IMPACTS OF CONSTRUCTING THE 3/22/85 LIST BECAUSE THE DOWNTOWN PLAN EIR DID NOT INCLUDE AN ANALYSIS OF PROJECTS IN THE NON-C-3 AREA IMMEDIATELY ADJACENT TO THE C-3 DISTRICT." (San Franciscans for Reasonable Growth)

Non-C-3 Transit
Demand - Difference
in Table 2 and
Table 3

Outbound PM Peak Hour
Regional Transit Demand
From C-3 District and
Non-C-3 District in
DTP EIR Table IV.E.2
(Table 3 2nd & Folsom
Supplemental EIR)

Outbound PM Peak Hour
Cumulative Travel Demand
From C-3 District ONLY
(Table 2 2nd & Folsom
Supplemental EIR)

1984 - 2000

1984 - 2000

1984 - 2000

MUNI

NE 1,600
NW 1,800
SW 1,100
SE 1,100

1,700
1,900
3,100
2,100

100
100
2,000
1,000

BART

Transbay
Westbay

11,800
2,400

11,800
2,400

0
0

AC

200

1,400

1,200

GOLDEN GATE

Bus
Ferry

3,200
800

3,200
700

0
-100

SAMTRANS

1,200

2,200

1,000

CALTRAIN

1,800

1,800

0

TOTAL

27,000

32,300

5,400

RESPONSE

Previous versions of this comment were submitted by the commenters in testimony before the Board of Supervisors' Planning, Housing and Development (PH&D) Committee (March 5, 1985), and in briefs prepared for the Board of Permit Appeals and the Superior Court for litigation concerning the Supplemental EIRs for four other downtown office projects (briefs dated February 1985 and April 1985). As such, this comment has been responded to on several occasions, specifically in a report submitted to the PH&D Committee on March 19, 1985 entitled "Downtown Plan EIR Forecasts and Non C-3 Analyses", in both the "Declaration of Linda Hausrath" and the "Declaration of Fred Dock" before the Board of Permit Appeals (February 27, 1985), and in a memorandum to the PH&D Committee dated May 7, 1985 entitled "Downtown Plan EIR Issues: Responses to Public Testimony at Planning, Housing and Development Committee Hearings". These responses in themselves contain numerous references to earlier versions of similar comments and responses in both the Downtown Plan EIR and the Supplemental EIRs for the One Sansome, Montgomery/Washington Tower, 160 Spear, and 101 Mission projects.

This response summarizes the points made in the documents cited above, and they are hereby incorporated by reference.

There are two approaches to cumulative impact analysis in the SEIR.

The list-based approach and the Downtown Plan forecast approach are two different methods for assessing the cumulative impacts of future growth in downtown San Francisco. Either or both of these methods can be used for the purpose of determining cumulative impacts. Both approaches are appropriate for this purpose and are consistent with State CEQA Guidelines for cumulative analysis.

The list-based approach provides precisely what the commenters claim CEQA requires: "an equally detailed analysis of the impacts of all downtown office space on the Department's March 22, 1985 List". In addition, the SEIR provides cumulative impact analysis using another approach: the Downtown Plan forecast approach. As demonstrated below, the challenges to the Downtown Plan forecast approach are not valid.

Both the list-based approach and the Downtown Plan forecast approach incorporate non-C-3 District growth. There is a difference in the methodologies related to assessing non-C-3 District growth and a difference in the level of detail provided about this part of the total cumulative growth analyzed in the SEIR. These are due to differences in basic definition between the two approaches which reflect the purposes for which they were originally intended. Because this comment focuses on the Downtown Plan forecast approach, the following section of the response addresses the question of how non-C-3 District growth is accounted for in this approach.

The Downtown Plan EIR methodology provides an appropriate cumulative analysis for this SEIR, including the impacts of non C-3 District growth.

The commenters claim that the Downtown Plan forecast approach provides "minimal analysis" of non-C-3 District growth and that the analysis is incomplete because non-C-3 District growth is not considered at the same level of detail as C-3 District growth. The following response summarizes how the larger cumulative future context (beyond the C-3 District), including citywide and regional growth (not just growth in the greater downtown area) was incorporated in the Downtown Plan EIR and the Downtown Plan forecast approach to cumulative impact assessment in this SEIR.

The purpose of the Downtown Plan EIR was to analyze the impacts of C-3 District growth. Growth in areas outside the C-3 District provides a future setting or background within which the impacts of C-3 District growth were assessed.

The policies of the Downtown Plan and Alternatives would regulate development and land use change within the C-3 District. The decision being evaluated in the Downtown Plan EIR was the choice of future land use and zoning policies for the C-3 District. Therefore, the purpose of the Downtown Plan EIR was to analyze the impacts of growth in the C-3 District as it would occur under the proposed policies. The Downtown Plan and Alternatives would not regulate development and land use change in areas outside the C-3 District. Thus, it was not the purpose of the Downtown Plan EIR to assess specifically the impacts of growth in other parts of the City or region.

This does not mean that growth in areas outside the C-3 District was ignored in the Downtown Plan EIR. The analysis accounts for future growth besides that represented by growth directly affected by the policies evaluated. The appropriate means of incorporating future growth besides that of the C-3 District is to use future citywide and regional growth as a context for evaluating C-3 District growth. Citywide and regional parameters were factored into both the C-3 District forecast analysis and impact assessments. The citywide and regional context consists of: areas surrounding the C-3 District (sometimes referred to as the non-C-3 District portions of the greater downtown), other parts of the City, and the rest of the region.

Growth in areas outside the C-3 District was treated as the future context for, not the subject of, the impact assessment in the Downtown Plan EIR. Growth in other areas must be included to the extent that it would use the same transit and transportation systems, compete for the same housing supply, or in other ways affect the impacts of C-3 District growth. This was the rationale for the approach taken in the Downtown Plan EIR. This approach treats growth in areas outside the C-3 District as a future setting or background within which the impacts of C-3 District growth were assessed.

There are three perspectives to consider when describing the Downtown Plan EIR treatment of non-C-3 District areas:

- The forecasts of C-3 District growth incorporate local and regional factors and are consistent with downtown, citywide, and regional growth patterns.
- The land use and employment impact sections identify how C-3 District policies would indirectly affect growth and development patterns in other downtown areas, in other parts of the City, and in the region.
- The housing, transportation, and other impact analyses incorporate growth in the greater downtown area, as well as other citywide and regional growth, as relevant, to provide the future setting or background within which the impacts of C-3 District growth are assessed.

In terms of the first perspective, economic analyses were completed to translate C-3 District policies into forecasts of future C-3 District growth. This analysis considered the relationship among the C-3 District, surrounding areas of the greater downtown, the rest of San Francisco, and the rest of the

Bay Area region in terms of growth potentials and the distribution of different types of economic activity. The purpose of this analysis was to develop C-3 District forecasts which reflected a realistic assessment of C-3 District growth relative to, and within the context of, the rest of the City and Bay Area region. It was not the purpose of this analysis to develop comparable forecasts of growth in other areas of the City outside the C-3 District.

From the second perspective, the Downtown Plan EIR explains that C-3 District policies can indirectly affect growth in the greater downtown area and in other City and regional areas as a result of their direct effect on growth in the C-3 District. The impacts of different C-3 District zoning policies on growth in other City and regional areas are described in the Downtown Plan EIR in terms of the direction and relative extent of changes in development patterns and activity levels. The text describes the resultant effects on the types of activities and rates of growth in other parts of San Francisco. This discussion focuses on effects in the greater downtown area.

The third perspective, that of the broader cumulative context for assessing the impacts of C-3 District growth, is the aspect most directly challenged in this comment. For the Downtown Plan EIR impact assessments and for the Downtown Plan forecast approach to cumulative impact assessment in this SEIR, downtown, citywide, and regional parameters were incorporated as relevant to provide a future context for analyzing the effects attributable to C-3 District growth. The approach recognizes that the C-3 District does not exist in a vacuum; growth will also occur in the greater downtown area and in other City and regional areas.

Each of the impact assessments focuses on the particular aspects of the cumulative context that are the most relevant. For example, the citywide and regional context for the housing analysis is concerned with future labor force, housing, and jobs, while the transportation analysis is concerned with overall travel on the systems that would be used by C-3 District workers. For each type of impact, information to describe the relevant context was collected from available sources or developed as a part of the Downtown Plan EIR analysis.

The future context for growth outside the C-3 District was not usually derived by starting with downtown, citywide, or regional growth of employment and space and estimating other measures of future conditions based on that growth. For most of the assessments, this procedure was not necessary, or, as was often the case, the data and analysis did not exist that would enable conversion of growth forecasts to a consistent set of citywide and regional conditions (such as residence patterns or travel patterns). Although citywide and regional parameters were not all derived from employment or space forecasts, they were chosen or developed so as to be compatible with each other and reflect the same, general future context. When it was difficult to develop consistent estimates, the analysis was conservative; parameters were chosen which would have the effect of overestimating, rather than underestimating, impacts. The housing and, particularly, the transportation impact analyses are the subject areas most frequently questioned by the commenters. The following subsections provide a summary explanation of the types of non-C-3 growth parameters used in each of these parts of the Downtown Plan EIR impact assessment methodology.

Housing

The housing analysis in the Downtown Plan EIR incorporated forecasts and assumptions about how other factors besides C-3 District employment are likely to change over time. Future scenarios for growth of labor force, housing, and employment throughout the region are described in the text of the EIR and were key factors in the analysis.

It may be easiest to understand that other employment growth was included in the analysis by recognizing that the total number of future employed persons (working residents of San Francisco and of all counties in the Bay Area region) equals the total number of future jobs (in the C-3 District, in surrounding non-C-3 areas, in the rest of the City, and in the rest of the region). In other words, the Downtown Plan EIR analysis recognizes that growth besides that in the C-3 District will also be competing for labor and housing in San Francisco and the rest of the region. The March 19, 1985 report cited at the beginning of this response includes a table presenting the numbers used to define this future regional growth scenario. (See March 19, 1985 report to PH&D Committee, p.7.)

Specifically with regard to the area of most concern to the commenters, the assumptions about future growth in the greater downtown area surrounding the C-3 District were those that reflect the potential growth identified in the employment impact section of the Downtown Plan EIR (potential employment growth through the year 2000 up to about 40,000 jobs in downtown areas surrounding the C-3 District). The citywide totals considered in the analysis incorporate this potential for the greater downtown area, in addition to growth in other parts of the City. Employment growth assumed for the rest of the region was that developed by the Association of Bay Area Governments (ABAG).

Comments stating that the SEIR housing analysis underestimates impacts because it does not account for growth in non-C-3 District areas are wrong. Non-C-3 District growth of the magnitude described above was included in the housing analysis in the Downtown Plan forecast approach to cumulative impact assessment in this SEIR. Both the residence patterns forecasts (describing where workers will live in the future) and the assessment of housing market impacts (identifying effects of employment growth on housing availability and prices and rents) incorporate this growth. Although the analysis and quantification are presented in less detail than the analysis and forecasts related to C-3 District growth, this is an adequate approach for the cumulative impact assessment. What is important is that the totals for more than C-3 District growth are included in the future scenario for describing cumulative impacts.

Transportation

The transportation analysis in the Downtown Plan EIR has two major components--one that makes specific projections of C-3 District travel demand and another that makes non-specific estimates of non-C-3 travel demand at a series of discrete (unique) locations [the sub-regional "screenlines" or measuring points listed in Tables IV.E.2 and IV.E.3, pp. IV.E.29 and IV.E.35 of the Downtown Plan EIR (all citations are to the Downtown Plan EIR unless otherwise noted)]. The C-3 travel estimates are built upon a comprehensive data base for the C-3 District, using the C-3 Employer/Employee Surveys and the forecasts developed in the employment and residence patterns analyses. The C-3 analysis is based on total employment forecasts, not just the increment of employment growth in the C-3 District. At screen-

lines where it was possible to identify a non-C-3 travel component, the method of analysis used to make the non-C-3 travel forecasts involved developing growth rates for total travel based on historic data measured at the screenlines. These growth rates in total travel were applied to the non-C-3 component of all travel at the screenlines to project growth in non-C-3 travel. This non-C-3 growth was added to the C-3 District growth to provide estimates of total future travel.

Description of how future non-C-3 traffic growth at the U.S. 101 screenline was calculated provides an example of this procedure. In general, for each of the analysis time periods (1981-1984, 1984-1990, 1990-2000), the appropriate overall percentage increase (based on the compounding of the average growth rate for total travel for the specified number of years) was multiplied by the non-C-3 component of travel at the screenline for the base year. Sample calculations for the 1981-1984 period are shown below:

- The plot of historic (1977-1982) data showed an annual average increase in southbound traffic volumes of approximately 1% per year [J. 22].
- For the interval 1981 to 1984, the compounded growth at 1% per year would be a total increase of 3% over 1981 volumes.
- The non-C-3 component of southbound peak-period travel on U.S. 101 at the screenline was identified as 10,020 vehicles [October 17, 1984 Supplemental Materials, spreadsheet ASSIGN 2HR].
- The 1984 non-C-3 travel was calculated by multiplying the 1981 volume by the total growth rate for 1981 to 1984, e.g. $10,020 \times 1.03 = 10,320$ peak-period vehicles.

The above process was used in an equivalent manner for I-280, Bay Bridge and Golden Gate Bridge traffic. The growth rates used in the traffic analysis are shown in the third (last) paragraph on p. J. 22.

Because of the inherent complexity of the transportation modelling process, it was not possible to separately identify the non-C-3 travel component for several of the transit carriers. Therefore, the portion of travel labeled "C-3 travel" in many cases also includes some non-C-3 travellers. As explained in Appendix J to the Downtown Plan EIR, in some cases it was not possible to separate C-3 and non-C-3 travellers reflected in the totals. (See pp. J.20-25.) When this was the case, since the Downtown Plan EIR covers

various alternative growth controls for the C-3 District, C-3 travel was emphasized in order to show C-3 District impacts in the most conservative light. For example, although BART ridership includes a non-C-3 component, the C-3 component includes all riders who enter the system at the Market Street stations. Obviously, some travellers using one of the four Market Street stations actually work south of Folsom or in Chinatown or on Van Ness Avenue. Because these travellers are included in the C-3 numbers, the non-C-3 component is under reported but the total of C-3 and non-C-3 remains accurate (see Appendix J, p. J.23). Golden Gate Transit and SamTrans illustrate this point even more strongly: survey data showed that C-3 use of these systems essentially equals total ridership, leaving no non-C-3 component. Although in reality there clearly are workers from outside C-3 who commute on these transit systems, the Downtown Plan EIR analyses called everyone C-3 because there was no statistical basis on which to separate the totals into two components and because the focus of the EIR was C-3 District impacts.

The transportation screenlines were established at maximum load points when possible, where they would illustrate greatest C-3 District impacts. They are therefore located such that, unlike a cordon count, they do not include all travellers from the entire greater downtown in all cases (e.g., Muni SE counts were made in the mid-south of Market area as shown on Fig. IV.E.1, p. IV.E.6 in the EIR). They are also located such that in many cases travellers have left the system prior to the screenline, having reached the stop near a store, a restaurant, their home or some other destination point. Thus, absolutely all travellers cannot be included in the totals. (If a cordon-type analysis had instead been chosen, the measuring locations could have been established to include the entirety of the greater downtown on all transportation systems, but many maximum-impact measuring points would have been missed with this method. In addition, the five years worth of data necessary to establish growth rates for portions of the analysis would not have been available at some locations along the cordon boundary.)

Travel by automobile is measured as numbers of vehicles without regard to the numbers of passengers, since vehicles cause the traffic impacts on streets and freeways. Therefore, while a non-C-3 component is clearly identifiable in the freeway analyses in the EIR, a precise number of non-C-3 travellers is not identifiable.

With these facts in mind, it becomes clear that while total travel on the various transportation systems is accurately projected by the transportation analysis model, the portion of the total that represents non-C-3 travellers cannot be identified in such a way as to permit direct comparison with any estimates of numbers of workers expected to have jobs in the non-C-3 portions of the greater downtown.

In summary, the commenters are incorrect when they state that the "Downtown Plan EIR performed an inadequate non-C-3 impact analysis" which "fails to consider" growth outside the C-3 District. The commenters attempt to "prove" that the non-C-3 portion of the transportation results is "too small" to reflect a reasonable amount of employment in downtown areas outside the C-3 District in the future. It has been demonstrated above that such an attempt at "proof" must fail because there is no claim in the EIR that a non-C-3 component can always be separately identified in the analysis. This does not make that analysis inaccurate; it is merely a different methodology from that which appears to be assumed by the commenters.

The transportation impact analysis measures the impacts of growth in total travel, incorporating both C-3 District and non-C-3 District growth parameters as appropriate. Although in some cases, the non-C-3 component cannot be separately identified, it is included in the estimates of total travel and is thus accounted for in the impact analysis. This total future travel scenario presented in the Downtown Plan EIR is also a reasonable and appropriate future scenario for the cumulative impact analysis in this SEIR.

Responses to Specific Points

The rest of this response is devoted to corrections of mis-statements made by the commenters in the course of their overall argument related to the impact assessment of non-C-3 District growth in the Downtown Plan forecast approach. It should be noted that many of the technical errors in previous versions of this comment have been eliminated in this version, after they were identified in the previous responses referenced above. Some mis-statements persist, although they too have been identified and discussed in previous responses.

Question of Vicinity

The commenters state that the Downtown Plan forecast approach does not analyze the cumulative impacts of probable future projects in the vicinity of the project and therefore does not meet the requirements of CEQA. This is not a valid statement for several reasons.

Use of the results from the Downtown Plan forecast approach does not limit the cumulative analysis to a "vicinity of a few blocks radius from the proposed project", as alleged by the commenters. As discussed in detail above, the impact analyses using the Downtown Plan forecast approach incorporate downtown, citywide, and regional growth, in addition to that in the C-3 District. Moreover, the C-3 District, for which the most detailed forecasting and analysis was done and for which forecasts are presented in the SEIR, is a large area (over 500 acres), defined by extensive zoning boundaries--not "arbitrarily". The project analyzed in this SEIR is within the C-3 District. The use of the Downtown Plan forecasts and analyses is consistent with both State CEQA Guidelines and the directions of the Court of Appeal. Furthermore, if the commenters prefer the "vicinity" defined by the March 22, 1985 List of projects, they can use the results of the cumulative analysis based on the list-based approach that is also presented in the SEIR.

[As a sidelight to this overall argument, it should be noted that the Downtown Plan forecast approach incorporates a larger amount of growth than does the list-based approach. In other words, more workers are accounted for in the impact assessment. Specifically, even in the detailed forecasts for the C-3 District only, the amount of employment growth is over 15 percent greater than the amount of employment growth represented by projects on the List for the entire greater downtown area (91,200 total employment growth forecast for the C-3 District from 1984 through 2000, compared to about 78,000 employment growth for the downtown area represented by projects on the March 22, 1985 List). This is because the Downtown Plan C-3 District forecasts were defined to estimate growth to the year 2000. The list is limited to reasonably foreseeable project proposals. It is also due to the fact that the forecast approach is not limited to a definition of growth as the amount of office and retail space in major new development projects. The forecast approach de-

finer growth across the full range of employment categories and also considers growth of employment in existing space. These differences are outlined in Figure 3 on p. 39 of the SEIR. The forecast approach also includes background growth parameters for downtown, citywide, and regional conditions in its impact analyses.]

Non-C-3 Growth is Included in the Impact Analyses

The commenters' statement that "By failing to include the Downtown San Francisco non C-3 area in its environmental impact analyses, the City underestimated by 50% the amount of additional development downtown and its impacts" is incorrect. As discussed above, the non-C-3 parts of downtown San Francisco are included in the Downtown Plan forecast approach to cumulative impact assessment.

The commenters quote only part of Linda Hausrath's Declaration in an attempt to characterize the Downtown Plan EIR analysis as incomplete, and the statement is taken out of context. The lack of detailed forecasts and analysis of the impacts of growth throughout the greater downtown does not make the Downtown Plan EIR analysis incomplete. As described in the first section of this response, the purpose of the Downtown Plan EIR was to analyze the impacts of different C-3 District growth scenarios in order to provide background for evaluation of C-3 District re-zoning. The analysis of C-3 District growth was appropriately detailed and comprehensive for this purpose. In addition, the impact analyses in the Downtown Plan EIR incorporated factors measuring other growth potential, including that in the rest of the greater downtown area, the rest of the City, and the region as appropriate. In the impact assessment, the impacts of C-3 District growth are described against a background future context of other growth. The EIR authors recognized that it would be inappropriate (and could be characterized as incomplete analysis) to presume that only C-3 District growth would affect citywide and regional housing and transportation systems in the future. This recognition has been repeatedly demonstrated in the Downtown Plan EIR itself, and in responses to comments and testimony concerning both the Downtown Plan EIR and the series of SEIRs that use the Downtown Plan forecast approach for cumulative impact assessment.

Problems with the Use of Non-C-3 Employment Estimates

As in previous versions of this comment, the commenters base much of their argument on estimates of non-C-3 District growth, derived from the Downtown Plan EIR, that they claim elsewhere (as noted above) are not included in that document. In arguments primarily focused on the transportation analysis, the commenters use an estimate of future non-C-3 employment growth derived from the Downtown Plan EIR. There are several points to be made about how this number is used in the comment.

First, the comment states that the Downtown Plan EIR presents forecasts of growth in non-C-3 District areas. This is not correct. Estimates were derived for purposes of describing background growth and estimating indirect impacts of C-3 District growth on surrounding areas. The estimate for the rest of the greater downtown is not a forecast of what is expected to occur, but, rather, describes a scenario of potential future growth during a certain time period, assuming that growth is allowed and encouraged by City policies in these areas.

In the Downtown Plan EIR, quantifications of future growth in areas surrounding the C-3 District could only be order-of-magnitude estimates. This level of estimation is adequate both to identify the indirect effects of C-3 District policies on development patterns and employment in areas surrounding the C-3 District, and to provide part of the future context of other growth outside the C-3 District.

Second, the estimate derived by the commenters (growth of 46,000 jobs in the greater downtown area outside the C-3 District) is somewhat higher than the estimate upon which the Downtown Plan EIR discussion, described above, is based (an amount closer to growth of 40,000 jobs). Whatever the number, however, it is important to understand what it represents and how it is used in the Downtown Plan EIR and this SEIR.

Third, the commenters state at one point that the 46,000 "are in the non-C-3 area near the Caltrain terminal" and, in other places, imply that the 46,000 are in the downtown area "immediately adjacent to the C-3". Both statements are incorrect and misleading. The Downtown Plan EIR discussion of where

most future citywide employment growth could occur describes the greater downtown area, approximately defined as south to China Basin, including Showplace Square and Mission Bay, Civic Center, the Washington/Broadway Special Use District, the Northeast Waterfront, and the rest of Chinatown. Employment growth in the general magnitude of 40,000 could occur throughout the larger area (depending on City policy in these districts), according to the Downtown Plan EIR analysis. Most people would not describe Civic Center and the Northeast Waterfront as "near the Caltrain Terminal" or China Basin and Mission Bay as "immediately adjacent to the C-3 District". The Downtown Plan EIR cannot be used to imply that all 46,000 are in the vicinity of the Caltrain terminal on the one hand, or, on the other, within the blocks immediately adjacent to the C-3 District.

Historic Trends Are Not the Basis for Non-C-3 Economic Growth

The commenters continue to confuse the Downtown Plan EIR economic analysis and the transportation impact analysis. "Historical trends" were not the basis for the non-C-3 growth used in all impact analyses. There is no such entity as a non-C-3 component of the economic analysis based on historical trends at regional screenlines. (Several rounds of comments and responses have reiterated this point.) Historic trends were only used to estimate future growth factors in parts of the transportation analysis. The consideration of non-C-3 District growth in greater downtown San Francisco in the land use and employment sections of the EIR was based on the conclusions quoted (in part) by the commenters, i.e. that, assuming City policy allowed and encouraged such development, growth would occur at a faster rate in these areas in the future under the Downtown Plan than in the past, i.e., not according to historic trends. There is no "critical contradiction" here. The commenters use two separate points out of context. Employment parameters for future growth outside the C-3 District were not specifically factored into the transportation impact analysis. Other consistent parameters were used that were appropriate for the purpose of this part of the impact assessment. (See below and Part 3 of the March 19, 1985 report to the PH&D Committee and pp. 3-13 of the May 7, 1985 memorandum to the PH&D Committee.) The employment parameters were used, as is appropriate, in the land use and employment impact assessment, and, as part of citywide and regional parameters in the residence patterns analysis and housing impact assessment. (See pp. 5-8 of Part 2 of the March 19, 1985 report to the PH&D Committee.)

Limited Use of Historic Trends in Impact Analysis

In the Downtown Plan EIR, historic trends are associated only with parts of the non-C-3 component of the transportation analysis. To estimate future growth in non-C-3 travel, historic growth rates in travel at certain screenline locations were developed from data collected over the 5-year period from 1977 to 1982, a period of high growth in downtown San Francisco. These growth rates measured growth in total travel at each of the analysis screenlines. Total travel at the screenlines is comprised of C-3 and non-C-3 components and includes non-San Francisco-based travel at the appropriate screenlines. This overall growth rate was then applied to measured non-C-3 travel only, to estimate future non-C-3 travel volumes, which were then combined with future C-3 travel volumes, estimated on the basis of the C-3 District employment forecasts. Use of the historic growth rate in total travel to describe future non-C-3 growth in travel assumes that non-C-3 travel would grow in the future at the same rate that C-3 plus non-C-3 travel grew in the past.

The commenters also state that the impact analysis is based "on historical trends over the entire Bay Area". This is another misconception about the Downtown Plan EIR analysis. Because of the location of the screenlines, the trends correspond to regional, citywide, or greater downtown growth. To infer that the trends are Bay Area-wide is to ignore the location of the data-gathering points (i.e. the screenlines). Many of the transit screenlines, even for regional transit systems, are inside the greater downtown area and thus cannot even remotely measure Bay Area-wide trends. The freeway screenlines could be characterized as regional but the locations are such that they reflect citywide trends more than regional trends.

This is reasonable because, as travel from San Francisco gets further from the City, it becomes increasingly diluted by other regional travel. At the Caldecott Tunnel in the East Bay, for example, C-3 District travel is a considerably smaller proportion of the total peak hour travel than at the Bay Bridge. The same is true for travel on U.S. 101 southbound and U.S. 101 northbound. The screenlines were chosen to pick up the greatest portion of cumulative travel from San Francisco (the area under study), not necessarily the majority of traffic in the Bay Area.

Flaws in Attempts to Show Lack of Coverage of Non-C-3 Travel

The commenters' improperly manipulate graphs and tables presented as part of the description of the transportation analysis to demonstrate that the EIR must have ignored non-C-3 travel. Because the information from the graphs and tables is misused, the commenters' contentions are, in fact, meaningless.

In one case, the commenters derive estimates of C-3 and non-C-3 riders from graphs presented as supplemental explanation of the Downtown Plan EIR transportation analysis. They then compare these estimates to estimates of C-3 and non-C-3 employment growth. The graphs cannot be interpolated to the degree of accuracy inferred by the commenters. As stated in the March 19, 1985 report to the PH&D Committee of the Board;

It was in a subsequent effort from available background data for the Downtown Plan EIR, that the Department estimated that the ratio of the non-C-3 transit trips to the total transit trips for each carrier would have been in the neighborhood of about 15 percent. This estimate is based on professional judgement using the background data from the Downtown Plan EIR.

The graphs were presented only as illustrations, not actual pieces of data. The complete figures as presented on March 19, 1985 to the Board of Supervisors contain the following footnote:

Information was taken from the EIR and background documents and presented in a new way in this and the following graphs in order to aid the Board of Supervisors in understanding the information in the EIR. Pages 4-7 of "Transportation Analysis for the Downtown Plan EIR - Supplemental Material" describes how the non-C-3 travel analysis was performed. As explained on these pages, while it was possible to separate C-3 and non-C-3 travel in some cases, it was not always possible to perform these calculations. In order to simplify the material for this presentation, for this and the following graphs the approach was to use an employment estimate for the non-C-3 areas (such as that suggested on Downtown Plan EIR pp. IV.C.47-48) and apply factors for absenteeism and percent of daily travel (both from Downtown Plan EIR data-- Appendix J., p. J.37, note 6, and the C-3 District Employee Survey) and modal split rates (Downtown Plan EIR Appendix J., p. J.37, note 2, citing "Guidelines for Environmental Review: Transportation Impacts," September, 1983, pp. 13, 20, 21). The resulting information for non-C-3 is approximate and for illustrative purposes only. (Emphasis added.)

As stated repeatedly (most recently in preceding sections of this response), there is no direct linkage in the Downtown Plan EIR analyses between these estimates of future travel and other estimates of employment growth. There are numerous reasons, including the fact that the non-C-3 parameters for the transportation analysis are not appropriate for the economic or housing analyses and vice versa. In particular, the location of screenlines selected to provide the most appropriate assessment of C-3 District impacts and the modal split/assignment process preclude any direct correspondence such as that used in the commenters' calculations. (This is particularly true for the attempt in SFRG-9 provided as an exhibit to the comments on this SEIR.)

In another case, the commenters have subtracted in- and outbound travel estimated at the C-3 District boundary from only outbound total travel measured at the screenlines. The C-3 numbers are comprised of two travel directions, only one of which is relevant to the outbound total from which "C-3 travel" is being subtracted. Thus, the result is inappropriately small. The basic problem with the commenters' approach is that they have subtracted the sum of two oranges from one apple. They consequently arrive at a meaningless number and then complain it is too small, representing "minimal analysis" of non-C-3 impacts. Moreover, the transit systems chosen to illustrate the point tend to fall into the group for which some non-C-3 travellers were included in the C-3 portion, as was described above. Therefore, even if the arithmetic comparison of the two tables could be accurately adjusted to subtract two like numbers, the result would not reflect the entire non-C-3 component that is accounted for in the travel projection totals.

Exhibit SFRG-10 is the result of the above-noted manipulations, based on Tables 2 and 3 of this SEIR. What is not stated, either in the SEIR or in the Exhibit, is that all of the information for the Downtown Plan assessment in Tables 2 and 3 of the SEIR comes directly from Tables IV.E.1 and IV.E.2 of the Downtown Plan EIR. Thus, the above-noted conclusions apply equally to Exhibit SFRG-10.

To clarify the ambiguity in the SEIR, the word "OUTBOUND" is deleted from the title of Table 2, p. 46 of the SEIR, and the first sentence of note 2 is amended to read (additions underlined):

"Inbound and outbound travel from the C-3 District only."

In a related argument, the commenters claim that "zero non-C-3 additional riders were assumed for the bridges." The commenters mis-state what was assumed in the analysis of travel on the Golden Gate and Bay Bridges, demonstrating a lack of understanding of the background for the transportation analysis.

At the time the Downtown Plan EIR was prepared, the Bay Bridge had been operating at capacity during the peak hour eastbound for several years (as documented by the Traffic Survey Series prepared by MTC) and the Golden Gate Bridge appeared to be at capacity during peak hours, as well. Recent (since 1983) trends in declining ridership on Golden Gate Transit and increasing volume on the Golden Gate Bridge show that the "capacity" assumed in 1982 is less than actual. Thus, the analysis was conservative in terms of the number of vehicles that could be accommodated on that bridge. Because the bridges were assumed to be at capacity during the peak hours, it was not logical to assume that vehicle volumes from either C-3 or non-C-3 sources would continue to increase during those hours since no additional vehicles could logically use the bridges during those hours. It was never assumed that no additional travellers would use the bridges, but for much of the analysis, vehicles could be counted while the number of occupants could not.

Because of the separate processes for modelling C-3 and non-C-3 travel, two separate techniques for estimating future vehicle volumes were used. For the C-3 travel, the mode shift analysis was used to shift latent auto demand (drive alone) from C-3 District employees and visitors to ridesharing and transit and thus vehicle volumes from the C-3 District on the bridges were kept fairly constant. This technique allowed "excess demand" to be identified and mitigated. For the non-C-3, no such process was available, so the assumption that vehicle volumes on the bridges from the non-C-3 would not grow was made. The assumption did not state that travel from the non-C-3 areas across the bridges would not grow-- only that vehicle volumes would not increase during the peak hours. This says nothing about the number of travellers. In fact, the number of riders crossing the bridges has been increasing over the past 10 years, as the peak average vehicle occupancy

during peak periods has increased from 1.7 to 2.1. (SEIR, p.47.) Thus, while non-C-3 travel cannot be reverse-calculated to derive employment figures, the transportation analysis incorporates additional travellers from outside the C-3 District.

COMMENT

"L. WHAT IS THE DIFFERENCE BETWEEN THIS PROJECT AND ANY SIMILAR PROJECT IN THE FUTURE THAT WOULD BE A FEW BLOCKS TO THE SOUTH

"Please explain how this project is different or similar in it's CUMULATIVE IMPACT ANALYSIS from planned nearby projects, such as those cited on page 19 of the EIR including 101 Mission, 160 Spear, 123 Mission, 121 Steuart, the Redevelopment Agency project, and Hills Brothers. Please specifically show how the analyses differ on the impacts from the project and please include the reasons for the difference." (San Franciscans for Reasonable Growth)

RESPONSE

Proposed and approved projects on the blocks immediately surrounding the project block are listed on pages 18 and 19 of the Draft SEIR. The Department anticipates that future projects in the blocks around the project, including sites south of the project in the non-C-3 area would be essentially the same as the proposed project in terms of employee types and densities, employee transportation modes and residence patterns. As such, the impact assessment methodologies developed for the Downtown Plan are appropriately used in environmental impact reports for all office projects in this area.

The Downtown Plan EIR analyzed growth in the C-3 District at a different level of detail than growth outside the C-3 District. From the perspective of that analysis, assessment of the growth represented by non-C-3 projects (such as Hills Brothers and Van Ness Gateway Center), is at a lesser level of detail than assessment of the growth represented by C-3 District projects. As described in the preceding response, in the Downtown Plan EIR, non-C-3 District growth is considered as background growth, that would contribute to impacts along with C-3 District growth. This non-C-3 growth is part of that background, so the analysis of this growth and its impacts is less detailed, as is the treatment of this growth in the Downtown Plan EIR text. These and other projects were definitely not ignored, however. The purpose of the cumulative perspective, with its citywide and regional growth context, was precisely to account for growth outside the C-3 District.

Any future project in this area, including Trinity Plaza (for which a DEIR has not yet been published), would be analyzed in a similar fashion using the Downtown Plan EIR methodology. Other listed projects, including 1155 Market, 1170 Market and 10 U.N. Plaza were analyzed differently due to differences in the methodologies used at the time of environmental review.

A similar but more detailed comment requesting a comparison of cumulative transportation analysis methodologies was responded to in detail in the One Sansome Supplemental EIR on pages 176-183. (The same material is also provided in the Supplemental EIRs for the three companion projects at 101 Mission, 160 Spear and Montgomery/Washington.) These responses explain how the list-based methodologies were updated over time and how this method differs from and cannot be converted to a forecast method. These responses, including the explanatory tables are hereby incorporated by reference.



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Department of City Planning

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June 10, 1985

Georgia Brittan
San Franciscans for Reasonable Growth
870 Market Street
San Francisco, CA 94102

Dear Georgia:

I am writing with the hope that you are responsible for the accuracy of the information given out by SFRG to the general public.

The other day, at one of the many presentations on the Downtown Plan, I came across an SFRG table purporting to show that of the 18.3 million sq. ft. of office space in the Plan EIR only 2.21 million sq. ft. remain to be approved. Since I knew that could not be true, I asked staff to evaluate the table. Apparently the table fails to separate projects within the C-3 district from those outside. I think most of the people following the Downtown Plan know that the 18.3 million sq. ft. were projected by the year 1997 the C-3 district only. The 1997 date assumes that projects approved at the end of the forecast period would take three years to build and fully occupy. In establishing how much of the forecasted growth is left to be approved, it is clearly a misrepresentation to use the cumulative list of projects that include both projects from within and outside the C-3 district.

For your convenience, staff have worked out a list that separates projects and have corrected the SFRG table for 1985. Perhaps you will be able to rectify any public confusion that may have resulted from this incorrectly constructed SFRG list.

Please call me if you have any questions at 558-4656.

Sincerely,

A handwritten signature in dark ink, appearing to read "Dean".

Dean L. Macris
Director of Planning

DLM:AG:ict

DEPARTMENT OF CITY PLANNING CORRECTED VERSION OF SFRG FIGURES
BASED ON THE MARCH 22, 1985 VERSION OF THE CUMULATIVE LIST
OF DEVELOPMENT IN DOWNTOWN SAN FRANCISCO
 (underlining indicates wording added by DCP)

	<u>DCP Corrected</u> <u>Numbers</u>	<u>SFRG</u> <u>Numbers</u>
C-3 Projects under construction according to the <u>March 22, 1985 List</u>	<u>7.06</u>	10.26 million s.f.
C-3 Projects approved according to the <u>March 22, 1985 List</u>	<u>4.34</u>	5.26 million s.f.
Projects that are under formal review according to the List. These projects are likely to be approved this year because they have had draft EIR hearings approved between March 22 and June 7 (See note 1 below.)	<u>.67</u>	2.13 million s.f.
TOTAL	<u>12.07</u>	17.65 million s.f.
C-3 Projects included in the Downtown Plan EIR Base Case Line that were under construction as of September 1, 1982 and are <u>still</u> under construction according to the List.	<u>- 1.60</u> -	1.56 million s.f.
Total after subtracting the above adjustment to base line Base Case. These projects must be subtracted to make the List comparable with the Downtown Plan EIR predictions of office development in Downtown San Francisco between 1984 and 2000 because this space was included in the Base Line.	<u>10.47</u>	16.09 million s.f.
Downtown Plan EIR prediction forecast of office development C-3 space in new office buildings built and occupied, 1984 - 2000	<u>19.3</u>	13.3 million s.f.
Plan EIR forecast of C-3 space in office buildings to be approved 1984-2000, but not occupied in 2000 (See note 2)	<u>3.26</u>	
C-3 Office development to be approved in Downtown San Francisco between now June 1985 and the year 2000	<u>11.19</u>	2.21 million s.f.
Annual average amount of C-3 office development to be approved between June 1985 and the year 2000. (See note 3)	<u>.17</u>	.17 million s.f.

SFRG's figure includes projects they consider likely to be approved this year because they have had draft EIR hearings. What will be happen to projects in the pipeline by the end of 1985 is speculative and would be affected by an imposed annual limit. Therefore only projects approved to date should be included. Only Embarcadero Center West with 671,000 s.f. has been approved from March 22nd to date.

2 This must be added because the number being derived is for approvals and not just for space built and occupied.

3 Note that space outside the C-2 area is not included in these figures.

-SAN FRANCISCANS FOR REASONABLE GROWTH

870 Market Street, Room 1119, San Francisco, California 94102

June 21, 1985

Mr. Dean Macris
Planning Director
Department of City Planning
450 McAllister Street
San Francisco, Ca. 94102

Dear Dean:

We are very disappointed with your letter of June 10. SFRG has told the public and the Board that the numbers used in our testimony are for the C-3 and non-C-3 areas. As SFRG has said throughout the hearings at the Board on the Downtown Plan EIR, we do not believe that historic trends for the non-C-3 accurately predict the impacts that will occur in Downtown. Because of this inadequate analysis we feel that the Downtown Plan EIR impact analyses represents an analysis of 18.3 million square feet of office development anywhere Downtown; whether it is in the C-3 or non-C-3 area. We have stated precisely this in our testimony.

The role of the Planning Department should be to focus and clarify issues for the Board of Supervisors. Your letter has confused the issue by comparing a DCP list of C-3 office approvals to an SFRG list of C-3 and non-C-3 office approvals, and by not informing the Board of this important difference. SFRG's list comes directly from information published by the Department and you know this. Your letter does not foster informed decision making by the Board.

Even if the Downtown Plan EIR analyses were accurate, the .723 million square foot C-3 annual limit listed on your revised chart has interesting implications. The DTP EIR states that 12% of development in the City has been in the non-C-3. This is the historic trend form 1965 - 1984. Since the DTP EIR used historic trends to calculate the amount of non-C-3 impacts, there would only be 12% more of the 723,000 square feet presumed to occur in the non-C-3 area on an annual basis. This would make the number for an annual limit approximately .800 million square feet citywide.

page two
Letter to Dean Macris
From SFRG
Re: Downtown Approvals

Even if the Downtown Plan EIR was correct, contrary to our own belief, you could only justify 800,000 square feet citywide annually, with no exception, and no grandfathering.

We find it very difficult to see how the DCP will be able to use the DTP EIR to justify the Mayor's 950,000 square foot annual limit with numerous exceptions and grandfathering.

Sincerely,

David Jones/gb.

David Jones
President
San Franciscans for Reasonable Growth

cc: Amit Gosh
Sue C. Hestor

DJ:gb

SAN FRANCISCANS FOR REASONABLE GROWTH

BASED ON THE 1985 VERSION OF THE CUMULATIVE LIST
OF DEVELOPMENT IN DOWNTOWN SAN FRANCISCO

Projects under construction
according to the List 10.26 million sq. ft.

Projects approved
according to the List 5.26 million sq. ft.

Projects that are under formal
review according to the List.
These projects are likely to
be approved this year because
they have had Draft EIR
hearings + 2.13 million sq. ft.

Total 17.65 million sq. ft.

Projects in the Downtown Plan
EIR Base Case that were under
construction as of September 1, 1982
and are under construction
according to the List - 1.56 million sq. ft.

Total after subtracting the
Base Case. These projects
must be subtracted to make
the List comparable with
the Downtown Plan EIR
predictions of office
development in Downtown
San Francisco between
1984 and 2000 16.09 million sq. ft.

Downtown Plan EIR prediction
of office development 18.30 million sq. ft.

Office development to be
approved in Downtown San
Francisco between now and
the year 2000 2.21 million sq. ft.

Annual amount of office
development to be approved
between now and the year 2000 .17 million sq. ft.

RESPONSE

The commenters have submitted correspondence and associated tables dealing with the comparison of the Downtown Plan forecasts for the C-3 District to the amount of office space under construction and approved and (by implication) remaining "to be approved between now and the year 2000" throughout the greater downtown. This correspondence is the most recent presentation of such numbers (and corrected numbers); similar information has been presented by the commenters before the Planning, Housing and Development Committee (PH&D) of the Board of Supervisors (and in other forums) and has been responded to by the Department in a report to the PH&D Committee, as well as in the DCP letter included as part of the comments.

The Downtown Plan forecasts for the C-3 District and the amount of space in projects on the March 22, 1985 List are independent estimates of future development for two separate (but related) areas. The basic flaw in the commenters' analysis is the presumption that these areas (and thus the estimates of future development) are one and the same. This is not the case. One of the estimates (the Downtown Plan forecast) is for the C-3 District, and the other (the March 22, 1985 List) is for a larger area. This larger area, the greater downtown area, is defined to include the C-3 District, plus the Northeast Waterfront, Chinatown, Civic Center/Van Ness, and South of Market areas.

In their June 21, 1985 letter and table, the commenters present an invalid equation of the Downtown Plan forecast of office space in the C-3 District to the amounts of office space in the greater downtown area on the March 22, 1985 List. This simply cannot be done; it makes no sense, because the List includes projects in parts of the greater downtown area that are outside the C-3 District boundaries. Ignoring the geographic distinction between the forecasts for the C-3 District and the projects throughout greater downtown San Francisco is equivalent to presuming that the number of trees planned for planting in Strybing Arboretum is the same as the total number of trees planned for planting throughout Golden Gate Park.

The purpose of the DCP letter and accompanying revisions to the commenters' table was to rectify the erroneous comparison, by comparing numbers for the same geographic areas. If space in only the C-3 District projects on the List is correctly subtracted from the Downtown Plan forecast totals, a different answer results from that presented by the

commenters. The DCP table shows the differences between space in only the C-3 District projects on the List ("DCP Corrected Numbers" column) and space in all the projects on the List ("SFRG Numbers" column). Of course the former is smaller than the latter. An identical revision exercise was undertaken in the March 19, 1985 report to the PH&D Committee (see Part 1, pp. 12-15, hereby incorporated by reference). The only difference is that the March 22, 1985 List was not available at the time of the revision exercise; the March 10, 1984 List was used. The revised table from the June 10, 1985 DCP letter incorporates the March 22, 1985 data. The basic response presented in the March 19 report remains the same.

If quantified forecasts through the year 2000 for the entire greater downtown area covered by the List had been prepared, consistent with the Downtown Plan C-3 District analysis and forecasts, the numbers would be considerably larger than those presented in the Downtown Plan EIR for the C-3 District only. Such forecasts are not now available, however. The conclusion that the amounts would be larger than those shown for the C-3 District only are implicit in the Downtown Plan EIR analysis. In fact, the same commenters reference this part of the Downtown Plan EIR economic analysis elsewhere in the comments, in making the point that there is additional growth in the greater downtown area besides that shown for the C-3 District. The Downtown Plan EIR is in agreement with this statement, and the text provides the commenters with a basis for deriving numbers to represent that other growth, outside the C-3 District. The commenters thus contradict themselves by saying, in this letter, that the C-3 District forecasts (represented here by 18.3 million square feet of office space) are the total amount of development that will occur "anywhere downtown".

In addition, in the June 21, 1985 letter, the commenters twice state incorrectly that "historic trends" are the basis for predicting non-C-3 growth and impacts in the Downtown Plan EIR. As stated repeatedly in response to these same commenters (elsewhere in these responses and in March 19 and May 7, 1985 testimony to the PH&D Committee of the Board of Supervisors hereby incorporated by reference), historic growth rates were used as input to only specific elements of the Downtown Plan EIR transportation analysis. Nowhere else in the Downtown Plan forecasts or impact analyses were historic trends used as predictors of growth or its impacts. Moreover, even in the limited area of the analysis in which historic growth rates were used, the trends were not those cited by the

commenters (trends in citywide office development patterns for the 1965-1984 period), and the means of incorporating these trends as growth factors were not those implied by the commenters. The use of historic growth rates in the transportation analysis is described in the first response in this section of Comments and Responses.

In summary, it is an inaccurate and illogical interpretation of the Downtown Plan EIR analysis and description of impacts to assume that the C-3 District forecasts from the Downtown Plan EIR represent growth throughout downtown San Francisco (i.e. both C-3 District and non-C-3 District growth) and that these forecasts are based only on historic trends.

COMMENT

"P. 44 Fourth Paragraph. Please show by how much the Downtown Plan EIR projections for employment exceed the List Based projections. Please compare the Downtown Plan EIR projections for the C-3 to the List and also show the Downtown Plan EIR projections for the Downtown area of San Francisco to the List." (San Franciscans for Reasonable Growth)

RESPONSE

The commenters request comparisons of the employment growth estimates in the Downtown Plan forecast approach to those in the list-based approach. The commenters request that these comparisons be shown for the two different geographic areas: the greater downtown area and the C-3 District. These comparisons are presented below:

Greater Downtown Area

- Downtown Plan EIR estimate of potential employment growth 1984-2000: 131,000 workers. (This estimate of total growth is the sum of the C-3 District forecast of about 91,000 workers and the estimate of growth potential for the rest of the greater downtown area of about 40,000 workers.)
- List-based estimate of employment growth: 78,000 workers.
- The Downtown Plan EIR estimate through 2000 represents about 53,000 more workers than does the list-based approach.

C-3 District

- Downtown Plan EIR employment forecast, 1984-2000: 91,000 workers.
- List-based estimate of employment growth: 47,800 workers.
- The Downtown Plan forecast through 2000 represents growth of about 43,200 more C-3 District workers than does the list-based estimate.

There are several reasons for these differences. The list-based approach is limited to a definition of growth based on known projects, while the Downtown Plan forecast approach estimates growth through a long-term planning horizon (the year 2000). The list-based approach is limited to office and retail growth as represented by projects on the List, while the Downtown Plan forecast approach incorporates growth in other uses. The Downtown Plan forecast approach also incorporates changes in the use of existing space which can result in additional employment without the addition of space. This is not part of the list-based approach. These and other differences are summarized in Figure 3, p. 39 of the SEIR, and are discussed in the associated SEIR text, pp. 36-38 of the section entitled "Introduction to Cumulative Impact Analysis".

[The numbers presented above are not exactly the same as those shown in Table C&R-1 in the first response in Section A.1. There is an explanation for this difference. The numbers above are the estimates of total growth for impact assessment used in the two approaches. The other numbers used in the Table are only for office and retail growth, to enable comparison of employment estimates to the amount of office and retail space on the list, for the purpose of developing a time frame for absorption of that space. The Downtown Plan forecast total shown above (91,000 workers) includes the 84,870 office and retail employment growth incorporated in the numbers in Table C&R-1 (see note 5 to Table C&R-1). The estimate of 40,000 additional non-C-3 workers is used in both presentations because forecasts of only office and retail employment growth in this area are not available.]

This comment indicates that there is confusion about the points being made in this paragraph (the fourth paragraph on p. 44 continuing to page 45, of the SEIR). The comparison of the Downtown Plan forecasts and the list-based estimates of growth are not necessary to this part of the transportation impact section. Therefore, to avoid further confusion, this paragraph is deleted from the text of the Final SEIR.

4. Scope

COMMENT

"M. THE MISSION BAY PROJECT MUST BE INCLUDED IN LISTS OF PROBABLE FUTURE PROJECTS

"The Department continues to violate its CEQA obligation to provide a reasonable list of probable projects by omitting the major single commercial project proposed for San Francisco -- Southern Pacific/Santa Fe's Mission Bay project. That project will be located immediately south of the Downtown core district on approximately 210 acres of land owned by Southern Pacific/Santa Fe.

"SFRG challenges the omission of the Mission Bay Project from the list of projects in this SEIR and in the Downtown Plan.

"It is not 'too speculative' for the Department and the Mayor to be involved in executing planning agreements for that property.

"On October 16, 1984, (this letter is in your files on Mission Bay) substantially before this SEIR will be certified as adequate, accurate and objective, Mayor Dianne Feinstein and James O'Gara, Vice President of Southern Pacific Land Co., entered into an agreement whereby Mayor Feinstein announced her support of Southern Pacific's proposal to construct 4,124,800 square feet of new office space, up to 2,600,955 square feet of 'research and development' space and up to 201,000 square feet of retail space.

"When the SEIRs in the Court of Appeal decision were before the Commission on December 6, Commissioner Bierman questioned the Department's position that Mission Bay was too speculative. (TR 12/6/84 12:4) The Department's response was totally misleading:

'...we have not yet received any communication about any precise project from Southern Pacific...The Mayor's discussions occurred last July. So, they still, as far as I know and as far as we know, are continuing to discuss what is an appropriate project down there, what is in their Master Plan.'
(TR 12/6/84 12:23)

"This response is outrageous. The Mayor had signed an agreement two months earlier setting out the parameters of the Mission Bay project. Given the role of the Planning Director in those negotiations and given the fact that the Mayor's letter of agreement was a public document, the Department was not only aware of that letter, but also knew that the response given to Bierman was incorrect in that the Mayor had already set out specific square feet of new development which would be considered by the City for approval.

"In January 1985 the San Francisco Chronicle reported that the Mission Bay project 'is moving ahead again on a fresh basis of 'collaborative' planning between the railroad and the city.' Planning Director Macris, according to that article, has a key role in that planning effort, which will be financed by the railroad, but controlled by the City. That story reiterates the terms agreed upon by the Mayor -- '6.7 million feet of offices. . .equivalent to 13 Transamerica pyramids' -- as the terms on which the project is being planned. According to that same article the planning process is due to be completed in 18 months. That means that project approval could occur well before the end of 1986, and at least part of the construction could start soon thereafter.

"Given the time frame for construction of new office space (as discussed in the Downtown Plan EIR) it is apparent that at least a portion of the Mission Bay project is a reasonably foreseeable project within the framework of CEQA and that its impacts on transit, transportation, air quality and housing, should have been included in the cumulative impact analysis.

"The other four Supplemental EIRs note that the Mission Bay project is tied to the amount of development in the downtown area analyzed in the SEIRs:

'Less development in the C-3 District would support the potential for more development in the other areas of San Francisco including Mission Bay. The policies of the Downtown Plan and the resultant high rents for C-3 District space would increase the demand elsewhere for lower rent space of the type that could be provided in Mission Bay. In other words, potentials for development in Mission Bay could be evidenced sooner with the Downtown Plan than with continuation of current policies.'

(LM SEIR p. 131, VP SEIR p. 129, CS SEIR p. 128, CC SEIR p. 133)

"The City's continuing failure to include Mission Bay in its analysis of cumulative development violates the law. As has been noted in the State's California EIR Monitor, in its discussion of San Franciscans for Reasonable Growth v. City and County of San Francisco (1984) 151 Cal.App.3d 61, 198 Cal.Rptr. 634 in its February 15, 1985 issue,

'The holding in this case did not address the question of whether a lead agency must analyze the effects of publicly announced projects for which permit applications have not yet been filed. Although the courts may ultimately determine such projects are not 'reasonably foreseeable,' it may be advisable at this time to discuss such related projects in terms of cumulative impacts if the lead agency has been working closely with the prospective applicant, possesses special knowledge concerning the nature of the project, and understands that an application is forthcoming. Certainly the lead agency would have access to such information and could easily include the information in its analysis of cumulative impacts. The effort required to include such information would certainly be less than or equal to that of discovering projects in other jurisdictions.'

(California EIR Monitor, Vol.12, No.1, pp. 6,7)

"Given the magnitude of the proposed Mission Bay project, and given the critical nature of the environmental impacts identified in the SEIR and the Downtown Plan EIR on transportation alone, the omission of any analysis of Mission Bay is inexcusable. The Final EIR must consider Mission Bay.

"SFRG wishes to incorporate by reference the following documents which are in your files:

Letter to Board of Supervisors Requesting release of remaining \$550,000 for study from Dean Macris for Mission Bay Project - August, 1985.

Mission Bay Study Work Program -- Program EIR, Central Waterfront Plan and Related Master Plan Amendments, Planning Code Amendments and Development Agreement. Draft July 19, 1985 and Final August, 1985.

Letter of April 8, 1985 from Dean Macris, Planning Director to Jim Furth of the Mission Bay Clearinghouse.

Letter of March 27, 1985 from James Augustino, Project Director to Dean Macris, Planning Director.

City Planning Commission Resolution No. 10254.

Letter of October 16, 1984 from Mayor Dianne Feinstein to James O'Gara, V.P. Southern Pacific Land Co. with attachment showing block by block land use map.

"In addition we cite and include copies of material that may not be in your files:

January 1985 article from the San Francisco Chronicle.

Board of Supervisors Resolution No. 345-85 approving use of funds for Mission Bay study from Santa Fe signed by Mayor Feinstein on 4/25/85.

"San Franciscans for Reasonable Growth included this material in the comments on Marathon (Second and Folsom EE 81.18) and wishes to incorporate the copies of cited documents into this project EIR.

"SFRG wishes to add to the record on Mission Bay the following new documents which are enclosed for your convenience:

September 11, 1985 article announcing Mission Bay Study will be completed by the end of 1985.

P. 21 of I-280 Concept Program City Staff Recommendation Full Report, June 1985 which suggests that elements of this project in the Mission Bay area be paid for by Mission Bay project sponsors, Santa Fe Southern Pacific Corporation." (San Franciscans for Reasonable Growth)

RESPONSE

The "Mission Bay Project" as such has not been precisely formulated. An extensive planning process is underway for the Central Waterfront Area, including Mission Bay. This planning process is expected to be completed sometime in late 1986 or early 1987, at which time amendments to the City's Master Plan can be considered by the City Planning Commission, followed by proposed amendments to the City Planning Code and Zoning Maps, both of which must also be acted upon by the Board of Supervisors. The present work effort also includes preparation of a development agreement enabling ordinance and a development agreement between the City and Santa Fe Pacific for the specific area within the Central Waterfront Area known as Mission Bay. These latter two pieces of legislation would also require action by the Board of Supervisors. If all of these actions were to result in approvals, a general framework of development in the area would be established. Precise development permits would still be required in order to permit actual construction and later occupancy of the first buildings in the Mission Bay project area. It is not expected that the area would be fully developed by the year 2000; no forecasts are yet available to predict how much might be developed by that year.

Background studies for major area-wide environmental assessment have been started to accompany the planning effort. This environmental analysis will cover a variety of alternative possible development programs for the Mission Bay Area. It cannot be determined this early in the planning process whether or not separate environmental review will be necessary for various building phases in the Central Waterfront area.

No formal application or request for environmental evaluation has been filed with the Department as of the date of these Responses. Because the Mission Bay development planning activities are not like a typical development proposal for a single building, it is not anticipated that the initial request for environmental review, when filed, will provide the same level of detail about building size, uses, design and amenities that are normal for the application. Thus filing a request for review will probably not initially define the project in such a way as to permit much more detailed analyses than is presently possible.

From the above scenario it can be seen that while there has been activity in the Department of City Planning regarding Mission Bay, development in the area has not yet been defined. The level of development described in the letter from Mayor Feinstein to Santa Fe Pacific Land Co. in 1984 is only one possible scenario. (The Mayor does not have sole authority over development proposals in San Francisco.) The acceptance by the Board of Supervisors of funds for planning studies was accompanied by a clear statement that the Board was in no way indicating any sentiment to approve any development in the Mission Bay (see Board Resolution No. 345-85 included in the comment).

The Mission Bay project is not properly included on any list of individual projects for cumulative analysis. There are a number of reasons for this which are discussed below. It is important to note, however, that while technicalities of a list methodology do not permit simple addition of development of Mission Bay to a list, forecast methods, such as that used in the Downtown Plan EIR, can account for this kind of potential but somewhat speculative development. No precise forecast or estimate of amounts and types of uses or transportation facilities and patterns is available for Mission Bay, but the Downtown Plan EIR does account for development in Mission Bay area that might occur by the year 2000. As noted on page C&R-B.38: "The EIR analysis does not ignore 'half the downtown growth,' the growth in 'functionally -- connected areas,' the cumulative list of major projects, or Mission Bay. . .The effects of all of these plans and projects on the 'economic

dynamics of downtown development,' are incorporated in the EIR analyses and C-3 District forecasts." (See e.g. pp. IV.C.35-36, IV.C.50, IV.D.60, C&R-B.37-43, C&R-B.56-59, C&R-B.75-76, and C&R-B.77-78, and Note 42, IV.D 81d.)

The transportation analysis in the Downtown Plan EIR clearly accounts for development outside the C-3 District, including development in the Mission Bay area. This is explained in detail in the Responses to Comments in the Downtown Plan EIR, Section E.1.9 (pp.C&R-E 25-29). In that Response it is pointed out that assuming full development of all office-type uses included in the Mayor's 1984 letter to Southern Pacific, without accounting for any housing or any additional transit facilities added in the area, and assuming travel patterns similar to those of the C-3 District, the travel impacts of the commercial portions of the Mission Bay development were shown to be included in the non-C-3 portion of the transportation analysis in the Downtown Plan EIR.

It would not be appropriate to speculate as to the total amount of office space that might be developed in Mission Bay and add that to the list of proposed and approved projects. To do so would ignore the fact that several thousand units of housing built in Mission Bay on the edge of the greater downtown could reduce transportation and air quality impacts. Such an approach would ignore any changes in the transportation system that might accompany Mission Bay development and would magnify the problems inherent in a list-based analysis of cumulative effects. As explained in the SEIR (Page 50), transportation analysis using a list of proposed projects overestimates the number of trips generated by the total square footage because those trips that move from one building to another within the study area are counted twice, as coming from both buildings. That is, because of the limited ability to adjust the standard trip generation factor of a building, all trips out of one building, some of which go to a retail or restaurant use in another office building and all trips out of that second office building to the traveler's destinations, all made during the peak period are all counted in the analysis. (These are called "linked trips.") Some of these trips are only one trip from office space to ultimate destinations but may be counted as two or more. Simply adding several million square feet attributed to Mission Bay to the total on the present list would further compound the exaggeration inherent in the list-based methodology, at a point when the proposed amount of office space in Mission Bay is not known.

There are other similar problems with a list-based analysis that again would result in misleading over- or under-estimated impacts by the addition of Mission Bay. The list-based analysis methodology fails to account for shifts in commute patterns from drive alone to carpool, vanpool and transit use. These mode shifts have been documented over the past 5 to 10 years and are accounted for in the methodology used in the Downtown Plan EIR. Without the adjustments, auto use is overestimated and transit use is underestimated.

A list-based method is one way to provide an indication of impacts of future development, but when another method is available, as here, which accounts in the appropriately general way for possible development in the Mission Bay area, it seems particularly unreasonable to simply add some maximum estimate to a list that already overestimates impacts. To "adjust" the list-based methodology for the noted problems approaches the employment forecast estimate used in the Downtown Plan EIR. This approach is presented in the SEIR as an alternative to a list-based analysis and includes Mission Bay development in its analysis insofar as is practical and reasonable at this time.

To require that alternative development scenarios be fully analyzed for the Central Waterfront and Mission Bay planning areas as part of EIRs on individual building proposals would be a de facto moratorium on building approvals until the EIR covering the planning effort for Mission Bay was completed. This would be similar to the moratorium that would have ensued had SFRG been successful in its challenge to earlier project EIRs based on the fact that an EIR on the Plan for the C-3 District was underway.

A more reasonable approach is to use the analysis available in the Downtown Plan EIR until more detailed analysis of the Mission Bay project can be prepared, circulated and reviewed in the Mission Bay EIR. This is not expected to be complete until the late 1986 or early 1987, notwithstanding the inaccurate reports in newspaper articles such as the September 11, 1985 article cited in the comment. Preparation of the Downtown Plan, its EIR and the various approval actions took four years. It is not unreasonable to expect the Mission Bay planning and decision making to take a somewhat shorter time, but no decisions are expected prior to 1987 and those decisions may not provide for any specific building permits. Actual construction and later building occupancy, when impacts might begin to be felt, is more likely to be several years away, with full buildout and absorption, likely anywhere from 2005 to 2020.

The point that Santa Fe Pacific is listed as the funding source for a portion of the I-280 Transfer Concept Program does not make the Mission Bay project any more imminent. The portion of the I-280 project attributed to Santa Fe Pacific is the removal of the stub-end of I-280 at Fourth Street in the South of Market Area. This piece of unused freeway is within the Santa Fe Pacific Mission Bay boundaries. It is logical to assume that if Southern Pacific wishes to develop in this area, it would prefer that the stub-end of I-280 be removed and would expect to finance the project. If this developer has no interest in removal of this part of the freeway, the stub end could remain in place without affecting the remainder of the I-280 program. The City does not plan to fund this portion of the I-280 Program.

B. LAND USE

COMMENT

"Page 5. In middle paragraph, how much more is 21.7 million sq. ft. figure than previous document?" (Sue Bierman)

RESPONSE

The 21.7 million square foot figure referred to by the commenter is in reference to the total net additional gross square footage of office and retail space in the C-3 District forecast under the Downtown Plan between 1984 and 2000. The total net additional gross square footage of office and retail space on the March 22, 1985 list of projects on the greater downtown area, included in the SEIR, is 21.8 million. It is appropriate to compare the March 22, 1985 list with the list included in the FEIR since they cover similar geographic areas; however, the geographic area covered by the Downtown Plan forecast is smaller than that covered by the list of projects.

The FEIR on the project analyzed the impacts of a list of projects, under formal review, approved or under construction, which totalled 17.3 million square feet of net new office space, and 0.6 million square feet of net new retail space, 3.1 million square feet (15%) of net new office space less than the 20.4 million square feet included in the March 22, 1985 list of projects and 0.8 million square feet (57%) less than the 1.4 million square feet of retail space in the list.

COMMENT

"On page 15, what yearly rate of growth is predicted in areas bordering C-3? 1.1 mil. gross sq. ft. is misleading as it is only in C-3, and should be included with total downtown prediction to give realistic picture of future." (Sue Bierman)

RESPONSE

There is no specific prediction of future development for areas bordering the C-3 District that is comparable to and consistent with the Downtown Plan EIR C-3 District forecasts. The statement in the SEIR is not misleading because it does not purport to represent more than the C-3 District.

The commenter is referring to the land use setting section, in which various available sources are used to describe downtown, citywide, and regional land use trends, in addition to conditions in the C-3 District. The impact sections of the SEIR describe the cumulative impacts of growth, including growth outside the C-3 District.

The commenter is referred to the section of these responses, entitled "Downtown Plan Forecast Approach/Analysis of Non-C-3 Growth," for a more detailed discussion of how growth throughout the greater downtown was accounted for in the cumulative impact analyses. As described in that section, the Downtown Plan EIR (the source of the forecast of 1.1 million sq. ft. of office construction in the C-3 District) did not include similar forecasts of office building construction for areas outside the C-3 District. Instead, estimates of growth potential expressed in terms of employment or travel, as appropriate, were factored into the Downtown Plan EIR analyses. The Downtown Plan forecast approach to cumulative impact assessment in this SEIR incorporates these parameters as estimates of the future situation in which there will be C-3 District growth in addition to other growth.

COMMENT

"P. 16. Please amend the first paragraph to spell out how much space by type will be absorbed under the Downtown Plan." (San Franciscans for Reasonable Growth)

RESPONSE

The preceding paragraph (the last full paragraph on page 15 of the SEIR) describes the Downtown Plan EIR 1984-2000 forecasts for the C-3 District. The forecasts are presented in terms of the net additional amount of space absorbed in the C-3 District during this time period. The overall net addition consists of a number of different components of changes in space use.

The SEIR text states that 16.8 million gsf of the total additional 21.7 million gsf would be office space. The next largest amount of additional space in the forecast is hotel space (4.4 million gsf), followed by housing (1.7 million gsf), and retail (1.4 million gsf). A net decrease in industrial/warehouse/automotive space is forecast (-1.7 million gsf), in cultural/institutional/educational/other space (-0.6 million gsf), in space devoted to parking use (-0.2 million gsf), and in residential hotel space (-0.01 million gsf). These decreases are due to demolition for new construction, as well as conversions to other uses.

This information is summarized in Table IV.B.11, p. IV.B.34 of the Downtown Plan EIR, and the majority of the land use and real estate development impact section of the Downtown Plan EIR text describes all of these changes in detail (see pp. IV.B.18-IV.B.54a). The SEIR presents only a general summary of the Downtown Plan forecasts, highlighting the office components of the change, because the project is an office project. The level of detail presented in this response is inappropriate for the SEIR text.

COMMENT

"P. 17 Please show with maps what development is being discussed in the third paragraph. Please show what was completed, what was thought would have been completed when the FEIR was certified and any new development that was not anticipated at the time of the FEIR. Please clarify whether by 'completion of 201 Spear in the 8th line' the SEIR means 'built' or 'occupied'." (San Franciscans for Reasonable Growth)

RESPONSE

The second full paragraph on page 17, referred to by the commenter, describes the cumulative list that served as the basis for the cumulative impact analyses in the FEIR, and the changes to the projects on that list since the Certification of the FEIR. The

information on the cumulative list, both that included in the FEIR and that in the Draft SEIR, is the total square footages of space forecast to be built and absorbed in the greater downtown area. The location of this space within the area of cumulative impact analysis is not relevant to the overall level of impact and the project's relationship to that cumulative impact. A map of the projects included on both the list in the FEIR and the list in the Draft SEIR, including information on changes in status of projects on the list from the FEIR, as requested by the commenter, would provide no new information, relating to the cumulative impact analyses, not already provided in the list itself.

COMMENT

"Page 19. The sentence, 'In general, projects on blocks near the project site continue the intensification of office development . . .' seems a bit of an understatement." (Sue Bierman)

RESPONSE

The FEIR, page 18, identifies that "The site lies adjacent to the south edge of the North of Market Area, . . . a neighborhood of about 20,000 people comprised predominantly of single, elderly white males and Asian immigrant families. Most commercial activity in the North of Market Area is devoted to retail sales and services such as restaurants, bars, shops, grocery markets and beauty parlors, some of which cater to local residents, and others which cater primarily to tourists or local office workers . . . The approximate ten square block area South of Market Street near the project site contains most of the low-cost housing available within the entire South of Market Area." In the Draft Supplemental EIR, pages 17 through 19, information provided in the FEIR, on future changes in land use in the project vicinity in terms of projects under formal review, approved and under construction, was updated using the March 22, 1985 list of cumulative projects in the greater downtown area. The square footages and status of all projects in the surrounding eight blocks is described, including changes in all projects reported in the FEIR and all new projects commenced since certification of the FEIR.

The statement referred to by the commenter tries to describe in qualitative terms, that the trends toward change from lower intensity land uses to higher intensity uses such as offices, described in the FEIR, have continued since certification of the FEIR.

COMMENT

"The other thing I'd like to talk about that this SEIR doesn't talk about and is of really importance in these next couple of months is the mid-Market rezoning. This SEIR does not consider it." (Georgia Brittan)

COMMENT

"There has been discussion of the mid-Market plan for the very reason that projects like this have tremendous growth inducing impacts upon my neighborhood. As Richard Livingston testified at one of the earlier hearings on this project, it is only four blocks from the Cadillac Hotel at Eddy and Leavenworth, the geographic center of the Tenderloin. There have been some additions to this EIR that talk about its proximity to the Tenderloin. But I think given the nature of the discussion in the city now about the mid-Market plan, you really need to rethink this project and add some discussion in the EIR about the mid-Market plan, why it was asked for and initiated, what the goals of it are, and how this project fits into a plan for this area. We initiated this some time ago because there are a number of projects along Market Street under consideration. The same project sponsor as this is proposing a project the size of Union Square West for the very corner of Eighth and Market, the Trinity Plaza project. That's why we have to have a mid-Market plan.

The Fifth and Market project that you discussed and debated and approved a while back is another reason for that. Nowhere in this EIR is there discussion of this effort to create a new area, a mid-Market Conservation and Rehabilitation District. That needs to be in there." (Bradford Paul)

RESPONSE

On April 29, 1985 the Board of Supervisors initiated imposition of interim controls to establish the "Mid-Market Revitalization and Conservation District" in the area generally bounded by Fifth Street on the east, by the South of Market Industrial and Housing Conservation Special Use District on the south, by Ninth Street on the west and by the North of Market Residential Special Use District on the north. The proposal would have resulted in a height limit of 90 feet for lots north of Mission Street and of 50 feet for the lots south of Mission Street. It would also have limited office development to a Floor

Area Ratio of 2 to 1. The proposal was made pursuant to the procedures of Section 306.7 of the City Planning Code, and was intended to remain in place while appropriate permanent controls were studied by the City Planning Department. The proposed district would limit newly proposed office development on the site of 1145 Market to 29,040 square feet, and would limit any new development on the site to a height of 90 feet. The proposal's precise effect on the current project would depend on the language of the ordinance and the date of its adoption by the Board. A Preliminary Negative Declaration on the proposed interim controls was published in May 24, 1985. This Preliminary Negative Declaration was appealed. On November 12, 1985, the Board of Supervisors withdrew the initiation of interim controls, after finding that "work on the permanent controls is proceeding satisfactorily."

In November 1985 the Department of City Planning published the Mid-Market Street "Proposal for Citizen Review." This study covered the same general area as the Board's proposal. It recommended no changes in the area north of Market Street, and height limits ranging from 90 to 120 feet as of right in the area between Mission Street and Market Street (with heights of up to 240 feet allowed on some sites with the provision of housing). It also recommended that areas south of Mission Street and many lots facing Sixth Street be incorporated in the Department of City Planning's forthcoming South of Market Plan. The proposal was later changed to include sun access protection for U.N. Plaza similar to that provided to properties of the Recreation and Park Department under Proposition K. This proposal, in its current form, would limit development at 1145 Market Street to 90 feet and would require that the project cast no shade on U.N. Plaza between one hour after sunrise and one hour before sunset. The proposal's precise effect on the current project would depend on the language of the ordinance and the date of its adoption by the City Planning Commission and the Board. Appropriate height limits on the Mid-Market area are still being studied by Department staff. The proposal is expected to be considered by the City Planning Commission in Summer 1986.

C. TRANSPORTATION

1. Transit

COMMENT

"P. 22 Please show a map with the old routes." (San Franciscans for Reasonable Growth)

RESPONSE

A map showing the transit routes in the project vicinity as of May 1983 is included as Figure 13 on page 26 of the FEIR.

COMMENT

"P. 43 First paragraph. Please discuss recent announcements of Federal and State cutbacks and their role in the implementation of the mitigation measures discussed in Appendix J of the Downtown Plan EIR and mentioned here. Please discuss the proposed MUNI fare increase or possible cut in service. Please discuss the current status of the MUNI Metro Turnaround. Is this project on schedule?" (San Franciscans for Reasonable Growth)

RESPONSE

There is no doubt that figures released in February, 1985 by MTC indicate that approximately \$226.4 million will be available next year for operating assistance throughout the nine-county San Francisco Bay Area, up from approximately \$185.4 million this year. However, this is an optimistic projection because it does not take into account a potential loss of federal operating assistance, which the Reagan Administration is pressing to eliminate.

The total figure of \$226.4 million includes a projection of \$32 million from the federal Urban Mass Transportation Administration (UMTA), approximately the same amount operators received this year in federal operating subsidies.

The Governor's proposed budget provides only \$11.2 million for operating assistance in the State Transit Assistance Program, down from approximately \$13 million distributed in the region this year.¹

At this point it is unclear exactly how these budget cutbacks will affect local transit service providers.

The San Francisco Board of Supervisors implemented a Muni fare increase on January 1, 1986. Fares rose from \$0.60 to 0.75 per ride. There were no service cutbacks.²

The Muni Metro Turnaround project is underway and proceeding on schedule. It is a high priority capital project and it is very unlikely that potential budget cuts would affect the project's progress.³

¹Metropolitan Transportation Commission, Transactions, February, 1985.

²Bruce Bernhard, Muni Finance, telephone conversation, May 27, 1986.

³Ron Niewiarowski, Muni, telephone conversation, November 8, 1985.

COMMENT

"P. 51 Second Paragraph. Please state that there will be an increase in commuters because the labor force that resides outside of the City will increase." (San Franciscans for Reasonable Growth)

RESPONSE

It is true that the labor force residing outside the City will increase in the future and that the number of downtown workers living outside the City will increase. It is also true that the number of commuters to downtown from outside the City will increase.

At the same time, however, the number of downtown workers living in San Francisco will also increase. In fact, downtown workers living in San Francisco will continue to outnumber downtown workers living outside the City. Therefore, increases in commute travel will come from both inside and outside San Francisco, not just from outside the City.

COMMENT

"P. 54 Please explain the difference between the numbers in Table 3 for 1984+ Cumulative List (1990 and 2000 capacity) and the numbers in the similar Table that appeared in Frederick Dock's declaration for the four Court of Appeal cases. This declaration was for the Board of Permit Appeals; it is dated 2/26/85 and is labeled Attachment 4. It is based on Table IV.E.2 of the Downtown Plan EIR." (San Franciscans for Reasonable Growth)

RESPONSE

The difference between Table 3 of this SEIR and Attachment 4 of the declaration result from the use of different cumulative Lists. Attachment 4 uses the March 10, 1984 List as the basis for the "1984+ CUMULATIVE LIST" columns while this SEIR uses the March 22, 1985 List as its basis. The Downtown Plan EIR columns and the 1990 and 2000 capacities are the same for each table.

COMMENT

"On page 55, paragraph 1, 'crush' loadings would increase passenger loading times (e.g. door jamming, etc.) which could cause deterioration of service." (Charlotte Cosulich, Caltrans)

RESPONSE

"Crush" or "jammed" loadings on BART are in the range of 1.5 to 1.8 times seated capacity. Because BART operates on a centrally controlled system, the "crush" loadings would not increase passenger loading times (which causes deterioration of service) as would be the case on a bus transit system; rather, the effects of "crush" loadings on BART would be reflected in increased levels of passenger comfort.

COMMENT

"Capacity expansion for the various transit modes should be discussed. A comparison between projected levels of transit service and the number of person trips generated cannot be made unless projected transit capacity improvements are identified." (Charlotte Cosulich, Caltrans)

RESPONSE

The transportation analysis in the SEIR is based on the Downtown Plan which assumes a specific set of transit improvements that are assumed to be made by the year 2000. As discussed on pages J.25-26 of the Downtown Plan EIR, the assumed improvements for all agencies except BART, are primarily comprised of vehicle acquisition and operating efficiencies and do not include major physical system expansions. For BART, the Daly City turnback has been included in the assumptions as has a new central control system. Neither the Muni Metro turnaround nor any extension of Muni Metro has been assumed.

2. Parking

COMMENT

"Was parking saturated in original document." (Sue Bierman)

RESPONSE

The original EIR identified parking spaces in the project area to be 95% occupied. A parking occupancy rate of 90% is generally considered saturated.

COMMENT

"Parking [discussion] seems adequate." (Sue Bierman)

RESPONSE

Comment noted.

COMMENT

"P. 21 Please state that the declining availability of parking in the C-3 is a policy of the Downtown Plan. (see fourth paragraph)." (San Franciscans for Reasonable Growth)

RESPONSE

The Downtown Plan policy is to "Discourage new long-term commuter parking spaces in and around downtown" and to "Limit long-term parking spaces serving downtown to the number that already exists." A basic premise of the policy is that additions to the

commuter load brought about by job growth should not be accommodated by additional automobiles. Bringing more autos to downtown would only add to the congestion which is already approaching unacceptable levels in some parts of downtown. Therefore a policy of the Plan is to construct new long-term parking only as needed to replace the loss of long-term parking in the core. The general policy has been in the Transportation Element of the City's Master Plan since 1983 and is simply repeated in more detail in the Downtown Plan.

COMMENT

"On page 7, paragraph 3, it appears that the parking deficit of 6,000 spaces should be changed to 7,000 spaces, given the demand of 58,000 spaces and the supply of 51,000 spaces." (Charlotte Cosulich, Caltrans)

RESPONSE

The last sentence in the third full paragraph on page 7 will be corrected to read as follows: "There would be a parking deficit of about 7,000 spaces in the year 2000 if vehicular demand occurs as projected." This sentence occurs in the Summary. The parking analysis in the text (page 68) is correct.

3. Traffic

COMMENT

"Page 21. The cordon count info is fascinating. Try to tell people driving the bridge, Bayshore, Beale, Main, etc., that its no worse than 1981. I don't believe it." (Sue Bierman)

RESPONSE

According to the 1983 San Francisco Cordon Count, prepared by JHK and Associates, vehicular traffic has actually decreased slightly (by about 3.7%) since the previous cordon count in 1965. In contrast, person trips crossing the cordon line have increased by about 7% since 1965. The number of persons leaving the Metropolitan Transportation District in the p.m. peak hour (4:30 to 5:30) has remained essentially the same through the last three cordon counts (1983, 1965, and 1959). Since overall person trips have been increasing, this suggests that the transportation peak is spreading to other hours.

COMMENT

"P. 65 First Paragraph. 'peak of the peak conditions would be prevalent during the peak hour and might extend into the peak period.' Would they definitely extend into the peak period if there is no modal shift as forecast?" (San Franciscans for Reasonable Growth)

RESPONSE

If no modal shift were to occur, then peak-of-the-peak conditions would extend into the peak period. However, as noted in the following response, the assumption of an unchanging modal split over time (i.e., no modal shift) is unrealistic and results in worse-than-worst-case conditions.

COMMENT

"P. 65 Second Paragraph. 'The results reflect the tendency of the list based method to overestimate regional auto travel.' Is this not a better estimate because overestimation is a more conservative conclusion?"

"P. 68 First Paragraph just before the footnotes. '. . . in particular because the list-based analysis assumes a static modal split and this overestimates future auto demand.' Is this not a better estimate because overestimation is a more conservative conclusion?" (San Franciscans for Reasonable Growth)

RESPONSE

As noted on p. C&R-E.12 of the Downtown Plan EIR, "A static (unchanging over time) modal split would not provide a worst-case for the horizon years. A static modal split implies a static residential distribution and a static transit supply; this is implausible in a dynamic environment. The transit and auto assignment . . . was conducted on the basis of transit system expansion and highway capacity constraints. It would be imprudent to assume increased service capabilities on transit and static highway capacity without a minor modal reassignment.

"If, however, the future modal assignments remained fixed at current levels the resulting impact analysis would not be the most conservative, in that it would underestimate transit ridership demands and overestimate auto use.

"Therefore, the suggested approach would yield a worse-than-worst-case scenario that is not based on experience of the last twenty years. In short, it is an improbable scenario."

COMMENT

"Freeway chart on p. 64 is very disturbing. The demand in 2000 is alarming. What neighborhoods face new freeways -- Visitacion Valley, Bayview, the Haight? On the Bay Bridge an extra 1,330 cars in p.m. peak, 790 in a.m. peak. 400 more a.m. cars on US 101; 530 more p.m. and on and on. Not a good prospect." (Sue Bierman)

RESPONSE

As noted in Chapter VIII: Summary of Comments and Responses, p. 251 of the 100 First Street FEIR (Certified September 12, 1985), "Neither the Downtown Plan EIR nor this [100 First Street] EIR analyze the potential to build new regional highway facilities." Rather, as noted on pp. 101-123 [100 First Street] EIR, the analysis has focused upon projection of future demand on the regional highways and bridges and the ability of those facilities to accept that demand. In the cases where excess demand was identified, mitigation has been described that emphasizes the need to use the existing freeway and bridge capacity with greater efficiency through increased ridesharing and transit use. As noted in the Comments and Responses, Volume III of the Downtown Plan EIR (see pp. C&R-E.64-66), implementation of five selected mitigation measures would provide the transit capacity to carry all of the excess demand projected in Table 11, p. 122 of this [100 First Street] EIR, at acceptable load factors. The first measure on pp. 162-163 of the 100 First Street EIR, under the heading Measures that could be Implemented by Public Agencies, summarizes and incorporates by reference the transportation mitigation program of the Downtown Plan EIR.

COMMENT

"Is the Supplement complete re commute time, how long crush will be? If not included, need the data." (Sue Bierman)

RESPONSE

As noted on p. 65 of the SEIR, peak-of-the-peak conditions would extend throughout the peak hour and possibly into the peak period. Regarding individual commuter times, the

Downtown Plan EIR states on p. C&R-E.14, "Commuter travel time, which is relevant only at the single-commuter level, is highly variable as it depends upon individual choice of route and time of travel. The transportation analysis has been conducted at an aggregated level (i.e., the C-3 District), from which projections of single-vehicle phenomena cannot be separated with any statistical validity. Projections of changes in the percentage of commuters within various travel-time categories (the base data for which is available for the recent past from the Census and the C-3 Employee Survey) can not reliably be converted into information about spreading of the peak period because changes in travel-time categories can occur as much from changes in residence patterns as from increasing congestion on transportation facilities."

COMMENT

"This development will contribute to the cumulative traffic growth on the State freeway system, specifically State Route 101 and Interstates 480 and 80. Since these systems in downtown San Francisco are already badly congested during peak periods, the result will be increased backups and delays." (Charlotte Cosulich, Caltrans)

RESPONSE

This comment is acknowledged as correct. As noted on p. 64, the project would represent about 0.1% of the year 2000 demand on Interstate 80, the Bay Bridge.

COMMENT

"The document should address motor vehicle traffic impacts on Market Street, resulting from this project or the cumulative developments of the Downtown Plan." (Charlotte Cosulich, Caltrans)

RESPONSE

The proposed project does not contain any on-site parking. Project vehicles would be parking at lots throughout the area. Auto traffic directly to and from the site would be restricted to taxis and service vehicles. Project traffic impacts would not be greatest on Market Street, but at locations where outbound project traffic focused to enter the freeway system. Traffic impacts were analyzed at Sixth/Brannan, Fifth/Bryant and Eighth/Bryant for project impacts and cumulative impacts.

4. Summary

COMMENT

"For our information, how much change is there in transit figures from previous EIR. Same for pedestrian figures. Did street congestion figure change?" (Sue Bierman)

RESPONSE

Transit ridership figures in the Supplemental EIR are lower than transit figures in the FEIR. Muni and AC Transit figures vary the most from the original by about 60 and 20 p.m. peak-hour person trips respectively. The difference in transit ridership for other agencies is less. These variations are expected due to revisions in the methodology used to estimate transit impacts made in the period between publication of the two draft documents.

Pedestrian impacts in the Supplemental EIR (estimated 130 midday peak-hour pedestrian trips, 100 p.m. peak-hour trips) cannot be compared to the FEIR since actual flow rates were not reported. However, the Supplemental EIR estimates that sidewalk conditions would remain unimpeded during the peak hours. The FEIR estimates a degradation of service on the Market Street sidewalk from unimpeded to impeded during the peak hours due to cumulative development.

As is stated in Appendix G of the Draft SEIR, impacts at local intersections (i.e., street congestion) cannot be compared between the FEIR and the SEIR because different intersections were analyzed.

D. AIR QUALITY

COMMENT

"Page 24. I don't understand why the only hot-spot monitoring was done in between 1979 and 1981, none since. With millions of sq. ft being built, and streets crowded, it would seem our department should make every effort to get new hot spot data downtown." (Sue Bierman)

RESPONSE

As stated on page 24 of the DSEIR, "hotspot" monitoring programs for carbon monoxide (CO) concentrations at specific intersections in the vicinity of the project site were conducted during the 1979-80 and 1980-81 winter seasons. The Department of City Planning (DCP) and the Bay Area Air Quality Management District (BAAQMD) have been in communication for some time regarding additional CO hotspot monitoring in the downtown area. In order to obtain meaningful data on the most conservative concentrations, CO monitoring must be performed continuously for several months during the CO "season" (winter, when frequent radiation inversions in the Bay Area result in the highest CO concentrations). The cost of such a monitoring effort (including equipment costs and labor costs for installation, operation and data analysis) can be substantial, especially if a number of locations are involved.

There are several areas within BAAQMD jurisdiction that experience violations of the State and Federal eight-hour CO ambient air quality standards (9 ppm). The worst of these is in the San Jose area. Accordingly, the BAAQMD has conducted CO "hotspot" monitoring and research in San Jose during the last three winters. The availability of funds has not allowed simultaneous CO hotspot monitoring in San Francisco.

At the request of the Department of City Planning, the BAAQMD has agreed to conduct CO "hot spot" monitoring at several intersections in the downtown area. However, the monitoring program has not yet been scheduled, as a funding mechanism for such a program has not yet been finalized by the Department and the BAAQMD. (Irwin Mussen, Senior Planner, BAAQMD, telephone conversation, February 11, 1985). The Downtown Plan Final EIR also identifies a mitigation measure to conduct additional CO "hotspot" monitoring in the downtown area, to validate that EIR's projection of a potential future violation of the eight-hour CO standards. In December 1985, the City monitored CO and counted traffic at the Sixth and Brannan intersection. These data are still being analyzed.

COMMENT

"The SEIR analyzes the air quality impacts of cumulative development in the project area. The analysis predicts exceedances of the State and national 8-hour carbon monoxide (CO) standard at three intersections in 1984 and 1990 and at one intersection in 2000. We

consider a project proposed in an area with predicted exceedances of the ambient air quality standards to have a significant air quality impact" (Milton Feldstein, Bay Area Air Quality Management District)

"Mitigation measures are specified in the previous EIR. We recommend that additional CO modeling be conducted assuming confirmed mitigation measures are implemented. If exceedances are still predicted, we recommend that the City consider requiring additional mitigation measures or delaying the project until gradual air quality improvements can safely accommodate new emissions." (Milton Feldstein)

RESPONSE

Table 8 of the Draft SEIR contained predictions of curbside worst-case CO concentrations which were made using the revised version of the Modified Linear Rollback (MLR) model developed for the Downtown Plan EIR. Violations of the state and federal 8 hour average CO air quality standards were predicted to occur in 1990 for all three of the intersections studied and for 2000 for the Sixth and Brannan intersection.

The emission factors originally used in the revised MLR model did not include the predicted reduction in future emissions from the statewide vehicle Inspection and Maintenance (I/M) program which is estimated to reduce motor vehicle generated CO by 18%. Since the preparation of the Draft SEIR the Bay Area Air Quality Management District has published a revised set of guidelines¹ for the preparation of air quality analyses. This new document contains emission factors which do include the effects of the I/M program.

The revised MLR model was rerun using the updated emission factors. The results are presented in the revised version of Table 8 shown below (1984 emission factors were not changed). The results indicate that the I/M program is predicted to be effective in eliminating the predicted violations of CO air quality standards at all three locations in both 1990 and 2000. As a result no significant CO air quality impact is expected to occur and the City would not require additional mitigation measures to further reduce CO.

The last sentence of the first paragraph on page 8 of the SEIR is deleted.

TABLE 8
EXISTING AND PROJECTED CURBSIDE CARBON MONOXIDE
CONCENTRATIONS AT SELECTED INTERSECTIONS

Intersection	Averaging Time	Concentrations (ppm) ¹			
		1984	Cumulative List 1990 ²	Downtown Plan ³	
6th/Brannan	1-hour	18.1	11.2	11.2	9.8
	8-hour	<u>13.4</u>	8.0	8.0	7.1
5th/Bryant ⁴	1-hour	16.2	10.4	10.4	9.3
	8-hour	<u>12.5</u>	8.0	7.9	7.0
8th/Bryant ⁴	1-hour	17.0	10.8	10.8	9.5
	8-hour	<u>13.4</u>	8.5	8.5	7.4

¹ Calculations for all scenarios were made using a revised version of the Modified Linear Rollback (MLR) method described in the Downtown Plan EIR. Background concentrations were calculated to be 7.4 ppm for one hour and 5.7 ppm for eight hours in 1984, 6.0 ppm for one hour and 4.5 ppm for eight hours in 1990, and 5.7 ppm for one hour and 4.1 ppm for eight hours in 2000. Underlined values are in excess of the state or federal CO standards. The one-hour state standard is 20 ppm, the one-hour federal standard is 35 ppm, and the eight-hour state and federal standards are 9 ppm. Emission rates were derived from the California Air Resources Board's EMFAC 6D computer model, as published in the BAAQMD's Guidelines, November 1985. These emissions take into account the reduction in CO as a result of the ongoing Statewide Inspection/Maintenance Program.

² Based on the list of projected Cumulative Office Development in Downtown San Francisco as of March 22, 1985 (see Appendix B, Table B-2, p. A-36). By the year 2000 a larger portion of the motor vehicle pool will meet federal and state emission standards. Therefore, air quality impacts were analyzed under the list-based method for the year 1990, as opposed to the year 2000, in order to provide the most conservative assessment even though the impacts would not be fully realized until the mid-1990s.

³ Based on the growth forecast methodology contained in the Downtown Plan EIR, Volume 3, Table IV.1.3, p. C&R-I.8.

⁴ Includes effect of adjacent elevated freeway.

SOURCE: EIP Associates and Downtown Plan EIR

The last paragraph on page 73 is revised as follows (revisions are underlined): "Although the emission factors differ from those used in the Downtown Plan EIR analysis in that these revised emission factors take the I/M program into account, these projections . . . "

The first sentence on page 75 of the SEIR is revised to read as follows (revisions are underlined): "The results indicate that the state and federal eight-hour CO standards would not be violated under 1984, 1990, or 2000 conditions under either the cumulative list or Downtown Plan scenarios at all three intersections studied." The second sentence is replaced as follows: "By not quantifying predicted reductions from the I/M program, CO emissions were overpredicted in the Downtown Plan EIR."

The first sentence of the second paragraph on page 75 of the Draft SEIR is revised to read as follows (revisions are underlined): "The California State Legislature has mandated a biennial Inspection and Maintenance (I/M) program . . . "

Insert paragraphs one and two on page 75 of the Draft SEIR after the third paragraph on page 73 of the Draft SEIR.

Replace the last sentence of the third paragraph from page 75 as follows: "To account for these reductions, revised emission factors have been used in the revised MLR model for this project."

The last paragraph on page 75 is deleted.

The paragraph on page 101 is revised to read as follows: "Add a new Section 'B. Air Quality' as a new paragraph as follows: 'The project would contribute to possible violations of total suspended particulate standards.'"

In the third paragraph on page 76, revise the third sentence as follows (revisions are underlined): "Cumulative downtown development had been projected"

In the third paragraph on page 76, the fourth, fifth and sixth sentences are replaced with the following: "By using the revised emission factors which account for the I/M program in the revised version of MLR contained in the Downtown Plan EIR, the City no longer

predicts violations of CO standards at the Sixth and Brannan intersection or other intersections which have been modeled in the greater downtown. Based on the above, cumulative greater downtown development would not conflict with objectives of the 1982 Bay Area Air Quality Plan regarding CO."

¹"Air Quality and Urban Development, Guidelines for Assessing Impacts of Projects and Plans, BAAQMD, San Francisco, CA, 11/85.

E. ENERGY

COMMENT

"P. 80 Second Paragraph. Why is it necessary to compare the two. Isn't the List method the conservative overestimation. If it is necessary to compare the two, then please show what the demand will be in the office space for the C-3." (San Franciscans for Reasonable Growth)

RESPONSE

The Draft SEIR includes forecasts of cumulative impacts based upon two methodologies. The list-based approach and the forecast approach. The list-based approach is included because the FEIR originally prepared for the project, and which is being supplemented by this document, used that methodology for forecasting cumulative impacts. Since certification of the FEIR a new economic forecast approach was developed for use in the Downtown Plan EIR, and is now the methodology used for forecasting cumulative impacts of projects in the greater downtown San Francisco area. The list-based approach is not the conservative overestimation but is simply one of the accepted methods for forecasting cumulative impacts. Appendix G to the Draft SEIR provides the most explicit comparison of the results of the two cumulative impact methodologies included in the Draft SEIR.

Table C&R-2 provides information on energy demand from the C-3 portion of office space on the March 22, 1985 list.

TABLE C&R-2
ESTIMATED C-3 DISTRICT ENERGY USE¹

Allowable Under Title 24 energy Budget

Total annual Btus ² per square foot of office space	126,000 Btu
Total annual Btus per square foot of retail space	200,000 Btu

Daily Natural Gas Consumption³

Estimated daily natural gas consumption per square foot	40 Btu
Estimated peak daily natural gas consumption	8,140 Therms

Monthly Electric Consumption³

Estimated monthly electrical consumption per square foot	1.4 kWh
Estimated total monthly electrical consumption	20 million kWh

Annual Consumption

Estimated total annual natural gas consumption	1,898,700 Therms
Estimated total annual electrical consumption	240.1 million kWh
Connected kilowatt load	82,700 Kilowatts
Estimated total annual energy consumption	2,649 billion Btu

¹ Energy use includes space conditioning, service water heating and lighting in accordance with allowable limits under Title 24. Estimated electricity includes an additional 3 kWh/sq.ft./yr. consumed by appliances such as typewriters, computers, coffeemakers, etc. than assumed by Title 24 estimates.

² Btu (British thermal unit): A standard unit for measuring heat. Technically, it is the quantity of heat required to raise the temperature of one pound of water 1° Fahrenheit (251.97 Calories) at sea level.

³ These calculations are available for review at the Office of Environmental Review, 450 McAllister Street, Fifth Floor, San Francisco, California.

F. RESIDENCE PATTERNS AND HOUSING

COMMENT

"Page 9. This paragraph is a pretty round about way of saying poorer people are to be forced out." (Sue Bierman)

RESPONSE

A response to this same comment appears in the Final SEIRs for the One Sansome, Montgomery/Washington Tower, 101 Mission and 160 Spear projects. That response points out that the referenced statement is a summary of the more complete discussion in the Residence Patterns and Housing Impact section of the SEIR. As the final point in a series of statements summarizing the types of changes expected in San Francisco's housing market as a consequence of employment growth, it identifies the group of people who could "bear the brunt" of the negative housing market impacts of downtown growth. It should not be interpreted as "poorer people are to be forced out". A variety of types of negative impacts could occur, including paying more for the same or lesser quality housing, giving up other household expenditures to pay more for housing, requiring additional household members to contribute to spending for housing, and deciding to move out of the City to find less costly housing. Some of these impacts affect living arrangements and the availability of money for other household needs; some affect where the household lives. The main point is that households adapt to higher housing costs in many ways, not always by moving or leaving the City. The response also emphasizes that downtown growth is only one of the many factors affecting the City's housing market.

The previous response (pp. 211-212 of the One Sansome Building Final SEIR) is hereby incorporated by reference.

COMMENT

"Will more crowded transit into and out of city, and packed roadways cause more of those who can afford it to try and live in the city, causing worsening housing conditions?" (Sue Bierman)

RESPONSE

It is true that transit and traffic congestion into and out of San Francisco are incentives for those who work in the City but live elsewhere to look for housing in the City, thus saving on commute time and costs. This is one of the factors behind the strong demand for San Francisco housing, and one of the factors behind the competition for San Francisco housing that results in high housing prices and rents having the housing market implications presented in the SEIR impact section. What the commenter describes is not in addition to the SEIR impact assessment. This interaction of commute time and costs with housing preferences has been considered.

It should also be noted that the interaction works the other way as well. Congestion is one of the factors behind the relocation of San Francisco offices to the suburbs, nearer the residences of a large part of the labor force. As job opportunities in the suburbs increase, it is also a factor encouraging people who live outside San Francisco to look for jobs nearer their home.

COMMENT

"P. 28 In Changing Conditions and Trends, First paragraph, are 'San Francisco Workers' all San Francisco workers or C-3 workers?" (San Franciscans for Reasonable Growth)

RESPONSE

The discussion applies to all San Francisco workers and C-3 District workers. Census data document these trends for all San Francisco workers. Similar data does not exist solely to describe the patterns for C-3 District workers. All indications are that the pattern holds true for C-3 District workers living in the City. This relationship (and the Census data) are discussed in more detail on pp. IV.B.45-IV.B.46 of the Downtown Plan EIR.

COMMENT

"P. 33 Top of the Page. Please tell which neighborhoods 'gentrification' is occurring in to give some understanding of the dynamic of displacement, particularly who is being displaced." (San Franciscans for Reasonable Growth)

RESPONSE

The detailed research effort required to document the extent of "gentrification" in San Francisco neighborhoods has not been undertaken as part of either the cumulative analysis for this SEIR or the Downtown Plan EIR. Earlier studies conducted in the late 1970's and early 1980's provide some neighborhood and Planning District data related to re-investment and neighborhood change. The commenter is referred to: Condominium Conversions in San Francisco, Department of City Planning and Members of the Real Estate Industry, November 1978; Displacement in San Francisco, Berkeley Planning Associates, September 2, 1980; and The Citizen's Housing Task Force Report, July 29, 1981 (mostly citywide data). Examples provided in these reports of the City areas where data indicate that re-investment has occurred and residents must pay more for housing or re-locate are: South of Market, Western Addition, Downtown, Bernal Heights, Central, and Buena Vista planning districts, and the neighborhoods of Hayes Valley, Haight-Fillmore, Dolores Heights, and the Inner Mission.

COMMENT

"P. 85 18th line in Differences in Cumulative Approach. Please add 'no definite time frame associated with the list, probably during the mid-1990's.'" (San Franciscans for Reasonable Growth)

RESPONSE

Page 85, the ninth sentence of the first full paragraph is revised to read as follows (revision in boldface):

"In addition, there is no definite timeframe associated with the list, **although it is probable that the projects would be built and absorbed by the mid-1990s** while the Downtown Plan EIR Forecast represents a best estimate of the development likely to be built and absorbed from 1984 to 2000."

COMMENT

"It is clear though that fewer San Francisco workers will live in San Francisco, forced out by higher housing prices. (Sue Bierman)

RESPONSE

The conclusion of the housing impact analysis is not that fewer San Francisco workers will live in San Francisco. On page 82, the SEIR states: "Employment growth and building development in downtown San Francisco will result in more employees working and living in the City." Table 9 on page 90 of the SEIR shows the numbers. According to the Downtown Plan forecast there would be an increase of 30,000 C-3 District workers living in the City during the 1984-2000 period. According to the list-based approach, there would be an increase of 39,000 workers in the greater downtown area living in San Francisco. At the same time, the SEIR impact discussion points out that there would be people who want to live in the City but cannot, for a variety of reasons, including San Francisco's relatively high housing prices. The commenter is referred to the response to the second comment in this section (F. Residence Patterns and Housing) for additional discussion of these issues.

G. MITIGATION MEASURES**COMMENT**

"Pages 31-34. I hope everyone reads this housing section. What a dismal picture. It surely raises the question of whether our housing mitigation, as unusual as it is, is solving much, and whether the only real mitigation would be a moratorium until developers build housing instead of offices, knowing they have to if they want to develop offices in San Francisco." (Sue Bierman)

RESPONSE

The commenter refers to part of the housing section of the SEIR. This section describes current conditions and trends in San Francisco's housing market and identifies the many factors contributing to the "dismal picture". Among these are low growth of the housing stock relative to demand, major changes in the financial markets affecting the cost and availability of financing for housing, lifestyle changes affecting housing preferences, changes in demographic and household characteristics that affect housing choice, and employment growth. One of the main points of this discussion is that there are many factors besides downtown growth that have contributed to problems of housing availability and affordability in San Francisco.

Therefore, mitigation tied to downtown development cannot be expected to solve all of the housing problems of the City. The Downtown Plan EIR presents a number of mitigation measures related to housing production and cost. Among these is the Office Affordable Housing Production Program (OAHP) which links housing mitigation directly to office development. This is being implemented. The other mitigation measures are being implemented or are being considered as part of the City's overall housing policy as expressed in the Residence Element.

Since the OAHP is the City's primary means of mitigating the contribution of employment growth to housing problems and a moratorium on development would also be a moratorium on the OAHP mitigation, there is not a strong rationale for the conclusion that a moratorium would be a more effective means of dealing with the City's housing problems. Moreover, a moratorium on office development would not address the other factors contributing to problems of housing availability and housing affordability in San Francisco.

COMMENT

"P. 95 Any discussion of the Transit Fee should include the Touche Ross report which sites the cost to MUNI of \$9.82. Please add this and include it in the Draft EIR of future buildings." (San Franciscans for Reasonable Growth)

RESPONSE

The Board of Supervisors established the Transit Impact Development Fee in 1981. The ordinance states that the fee is intended to recover capital and operating costs of increased peak-period transit service associated with new office construction (including conversions in use) in downtown San Francisco. Developers of office properties in a specified area are being assessed a one-time fee based on their share of added transit demand over the expected economic lifetime of their properties.

At the time the ordinance was being considered, an analysis by Bruce Bernhard, Muni's Chief Financial Analyst showed that the net costs of expanded Muni service to meet added peak-period demand, using 1980-82 data, were \$9.18 per square foot of office space amortized over the useful life of the building. The Board of Supervisors, in adopting the

ordinance, set a ceiling for the Transit Fee of \$5.00 per square foot. Section 38.6 of the ordinance requires that the net cost estimate of expanded Muni service as a result of new downtown development be reviewed annually. The transit fee would then be adjusted accordingly, to reflect changing costs of adding, operating and maintaining additional transit service. Subsequent to adoption of the ordinance, Touche Ross and Company, economic consultants to the City, analyzed the net costs as of the base fiscal year, 1980-81 and presented in its "Transit Impact Development Fee Cost Study" (June 27, 1983), a net cost figure of \$8.61 per square foot. A second analysis using fiscal year 1981-82 data was published under the same title (dated July 1983, corrected September 9, 1983); this updated study concluded a \$9.82 per square foot net cost. The City has undertaken no further cost studies. (Bill Courtight, Assistant to the Budget Analyst, telephone conversation, March 20, 1985.)

Pending a final resolution to the litigation on the TIDF, the Transit Fee is being collected for all new office development in downtown San Francisco, and funds have been deposited in an escrow account. The funds will become available to the City for Muni's use if the ordinance is ultimately upheld. (Peter Busch, Attorney Representing the City, telephone conversation, March 20, 1985.)

COMMENT

"Page 11. If we think \$5 is too low a transit fee per sq. ft, shouldn't we alert Board of Supervisors to that. What dollar figure would be more realistic? (Sue Bierman)

RESPONSE

The Board, in amending the Transit Impact Development Fee Ordinance in 1984, specifically found that the net present value of loss which would be incurred in providing additional peak-period transit would be in excess of \$5.00 per square foot (\$8.36 per square foot), but nevertheless chose to limit the transit impact fee to \$5.00 per square foot of development. The Board is required under the aforementioned ordinance to review the fee schedule annually, or more often as it may deem necessary, to insure that, subject to the limit of \$5 per square foot, the fee is adequate. If the Planning Commission believes \$5 is too low a fee, it may relay this information to the Board for its consideration.

COMMENT

"P. 97 in Mitigation Measures not Included as Part of the Project, please include the positive effect traffic controllers would have in improving gridlock in Downtown and how this could be implemented." (San Franciscans for Reasonable Growth)

RESPONSE

The Mayor's office, in conjunction with other City Departments, is currently conducting a study of traffic enforcement. The effects and costs of traffic controllers at Downtown intersections is one of the issues the study will examine. The recommendation of the study could be implemented by the San Francisco Police Department if funded by the Board of Supervisors.

The following mitigation measure is added to p. 95 of the SEIR, following the last paragraph under "Measures That Could be Implemented by Public Agencies":

"Recognizing that intersection gridlock is the result of motorists not complying with the existing traffic laws that prohibit a vehicle from entering an intersection if that vehicle cannot exit the intersection, the Police Department could expand its program of point traffic control to either cover more intersections and/or operate during longer time periods on weekdays. This measure would require either diverting sworn officers from patrol work or the hiring of additional traffic controllers."

The above measure reiterates Measure 53, p. VE.30a of the Downtown Plan EIR.

COMMENT

"P. 98 The first sentence in section 3 is irrelevant to the SEIR and should be removed." (San Franciscans for Reasonable Growth)

RESPONSE

The statement is relevant in that it provides background information on how at least one court views the issue of housing as it relates to CEQA. Insofar as no appellate court has addressed this issue, the City relies on this decision for guidance. The last part of the second sentence in section 3 which reads "and is the law of that case" has been deleted as irrelevant to this SEIR.

COMMENT

"P. 98 Please describe the total cost of the St. Francis Place project. Please describe how many of the units are low and moderate income." (San Franciscans for Reasonable Growth)

RESPONSE

There is no relationship between St. Francis Place and the project. The project's housing mitigation is described on page 98 of the SEIR.

H. SIGNIFICANT ENVIRONMENTAL EFFECTS

COMMENT

"P. 100 How can housing be mitigated to 'a level of insignificance' when this project has not supplied housing on a regional level. This is very significant because this EIR states there will be more commuters. How will this cumulative demand be met?" (San Franciscans for Reasonable Growth)

RESPONSE

The housing mitigation for this (and other) office projects is designed to mitigate housing impacts in San Francisco. The impacts are most significant in San Francisco, as evidenced by the information presented in Table 9, p. 90 of the SEIR. The sections of the table showing the workers in the C-3 District and greater downtown area as a percent of the total employed population in each part of the region support the two conclusions in the SEIR text (p. 89). First, that while downtown workers represent a relatively large share of all employed San Franciscans, they represent relatively smaller proportions of the employed residents of other Bay Area counties. Second, that downtown workers would not require much larger shares of the region's housing in the future than they do now and, thus, that, by itself, downtown growth would make only a small difference in the region's housing market outside San Francisco. These conclusions are based on a cumulative analysis of regional labor force, housing, and employment, incorporating a future regional housing supply scenario consistent with local policies (as forecast by the Association of Bay Area Governments).

Moreover, there are legal limitations on San Francisco's ability to impose mitigation requirements that would be implemented outside the City's boundaries. San Francisco has no jurisdiction over and no ability to control local policies affecting housing production in other parts of the region. Similar comments were addressed in the Downtown Plan EIR Responses to Comments, see Section D.5.2, Downtown Plan EIR, Volume 3: Summary of Comments and Responses, pp. C&R-D.77 - C&R-D.79.

I. ALTERNATIVES

COMMENT

"The DSEIR basically disregards the Downtown Plan. You do not have in this EIR any Downtown Plan conforming alternative. I am asking that you do a totally Downtown Plan conforming alternative in this DSEIR, conforming not only in terms of the physical aspects of the project, i.e., no shadows at all across the street, which was the hot issue when this project was before you in 1982, 1983, and that you also impose the mitigation measures of the Downtown Plan." (San Franciscans for Reasonable Growth)

RESPONSE

The 1145 Market project was approved by the City Planning Commission (CPC) on October 20, 1983, prior to approval of the Downtown Plan by the CPC (November 18, 1984). The project conforms to the City Planning Code in effect at the time of approval and an alternative was included in the FEIR which compared the project to an alternative conforming to the specifications of Guiding Downtown Development, a precursor to the Downtown Plan. In order to provide as much information as possible regarding potential development of the project site, and the various impacts of that development, the following is added as pages 101a through 101o of the FSEIR:

E. ALTERNATIVE 5: DOWNTOWN PLAN ALTERNATIVE

Description

This alternative would consist of a project directly complying with the City Planning Code as revised to implement the Downtown Plan (Ordinance 414-85, effective October 17, 1985).

The Downtown Plan Alternative would entail a project similar in use and bulk but would be smaller and lower than the project as currently proposed (see Figure 3, page 156). The building would be built to 7 stories (112 ft.), (127 feet to top of mechanical penthouse), 5 stories (60 ft.) shorter than the project as currently proposed. In total, this alternative would contain 87,150 gsf of office space (50,050 gsf or 36.5% less than the current project) and 8,000 gsf of retail space (the same as the current project). The FAR for this alternative would be 6:1, compared to 10:1 for the current project. The alternative would contain 1,750 gsf of public open space, as required by the Downtown Plan. As with the current project, there would be no on-site off-street parking provided. This alternative would include two off-street freight loading spaces, one more than in the current project.

Along Market Street, the roof line of the alternative would be at 112 feet. There would be a 25-foot setback at 85 feet and another at 98.5 feet. Although the height of the alternative would be decreased compared to the current project, other design features, including facade treatment and materials would be the same as in the current project.

Impacts

The office and retail space in this alternative would be 50,050 gsf (34.5%) smaller than the proposed project, resulting in a proportional decrease in land use impacts which are due to increases in intensity and type of uses on the project site. Since the height of this alternative would be 60 feet less than that for the current project and 34 feet less than the adjacent 1055 Market building, the alternative would have less impact on building scale in the project vicinity than the current project. This alternative would be similar in height to the existing older development along mid-Market Street.

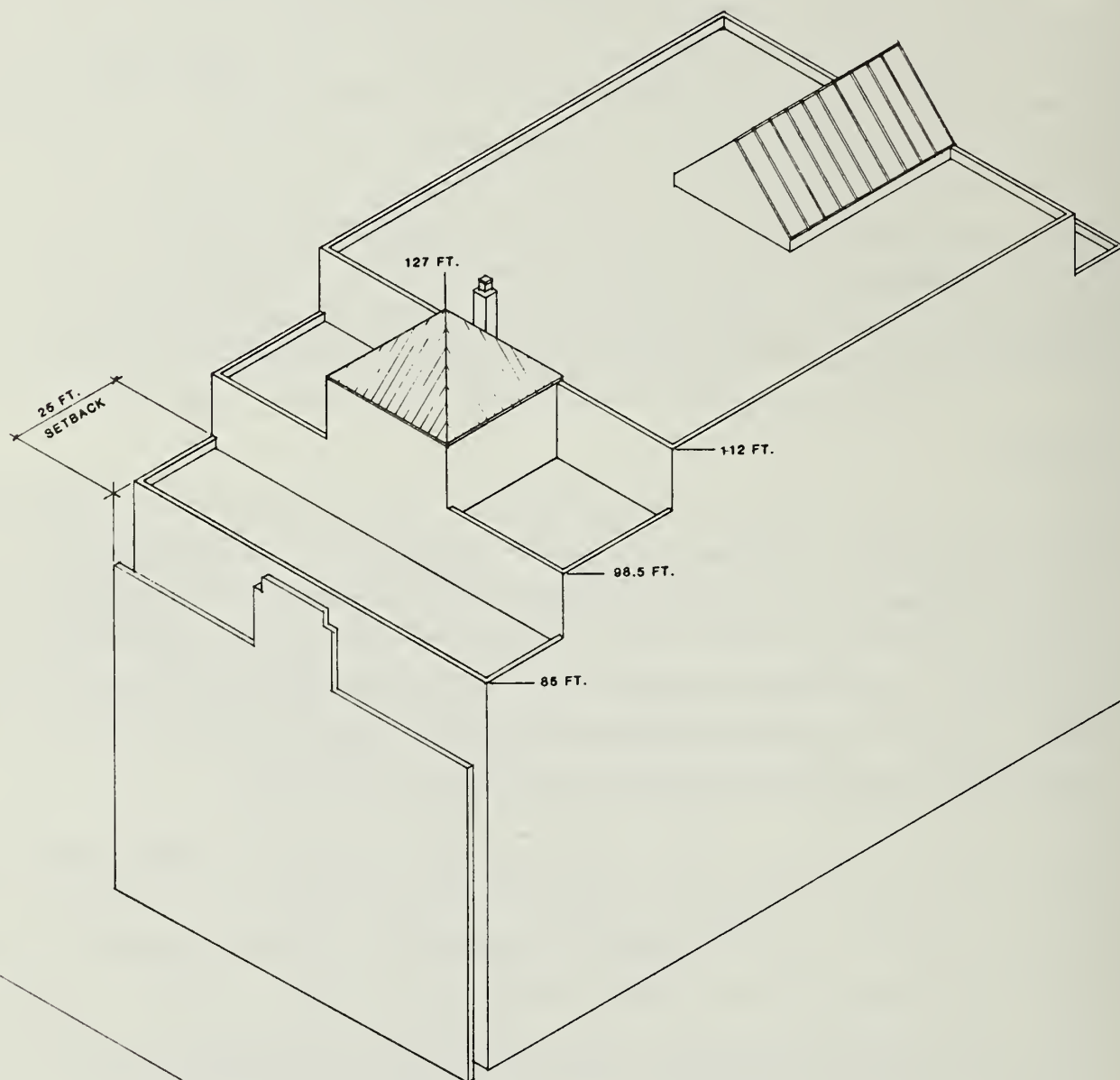
There would be 25 percent less traffic generated as a result of this alternative than for the current project with resultant decreases in impacts on transit, local traffic, parking occupancy and the street network as compared to the current project; a smaller percentage decrease than the overall decrease in space due to a greater proportion of retail space to office than in the project. Traffic generated air quality impacts would decrease proportionately with the decreased travel demand, as compared to the proposed project.

1145 MARKET STREET ALTERNATIVE FIVE: DOWNTOWN PLAN ALTERNATIVE

FIGURE 3

SOURCE: BACKEN, ARRIGONI AND ROSS

FEET 0 16 32 64



Market Street

At 10:00 a.m. on March 21, the alternative would cast new shadows along Market Street and on a portion of the sidewalks on the north side of Market, opposite the project site. By contrast, the proposed project would cast shadows onto the southeastern corner of U.N. Plaza at that time. By noon, the alternative and the proposed project would cast shadows on Market Street with south side sidewalks covered by shadows from existing buildings. By 2:00 p.m. neither the alternative nor the proposed project would cast new shadows.

Morning shadows, the longest in the direction of U.N. Plaza would become shorter as June 21 approaches. By that time, neither the alternative nor the proposed project would cast any new shadows on U.N. Plaza.

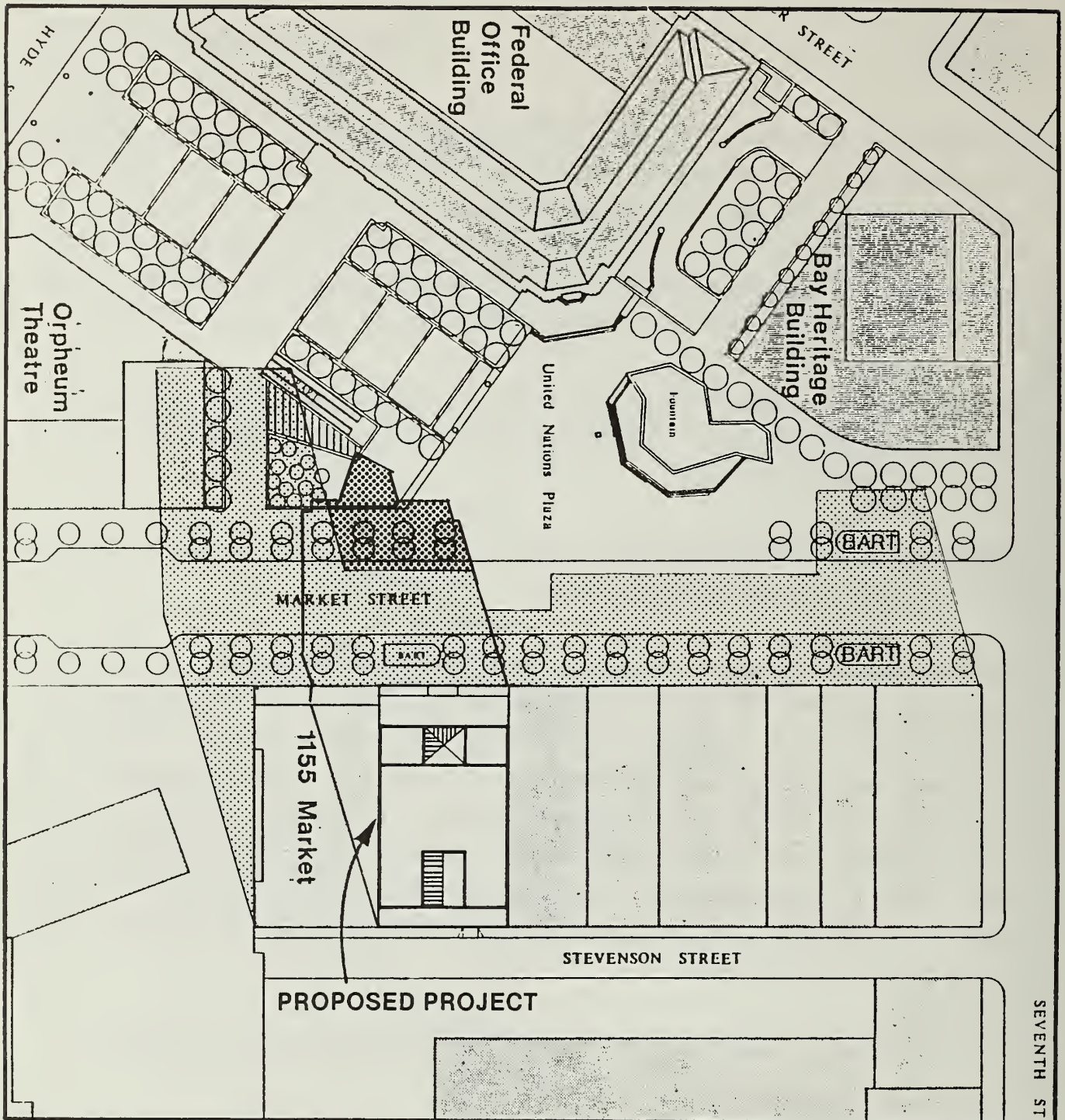
Shadows would elongate through the summer. By September 21 conditions would be similar to those described above for March 21.

The new shadows cast by the alternative would occur in the mornings in the fall, winter and spring. On December 21, at 10:00 a.m. the alternative would add shadows on the western portion of U.N. Plaza, reaching the steps of the Federal Office Building, but not as extensive as those cast by the proposed project which go beyond the front steps. The alternative would not add any new shadows along Market Street in the afternoon since existing shadows cover the street and sidewalk compared to the proposed project which would continue to cast shadows on U.N. Plaza at this time. By 3:00 p.m. on this date neither the alternative, nor the proposed project, would add any new shadows along Market Street or on U.N. Plaza.

Figures 4 through 14 describe the new shadows that would be cast by the alternative.

Reasons for Rejection

The project sponsor would reject this alternative because (1) the proposed project has already been approved by the City Planning Commission and (2) removal of stepped back upper floors would reduce the number of open-air balconies suitable for potted plant materials as decorative elements and would weaken a definition of the building's mid-section.



Shadow Patterns : Alternative Five

FIGURE 4



EXISTING SHADOWS



SHADOWS ADDED BY
ALTERNATIVE FIVE

DATE

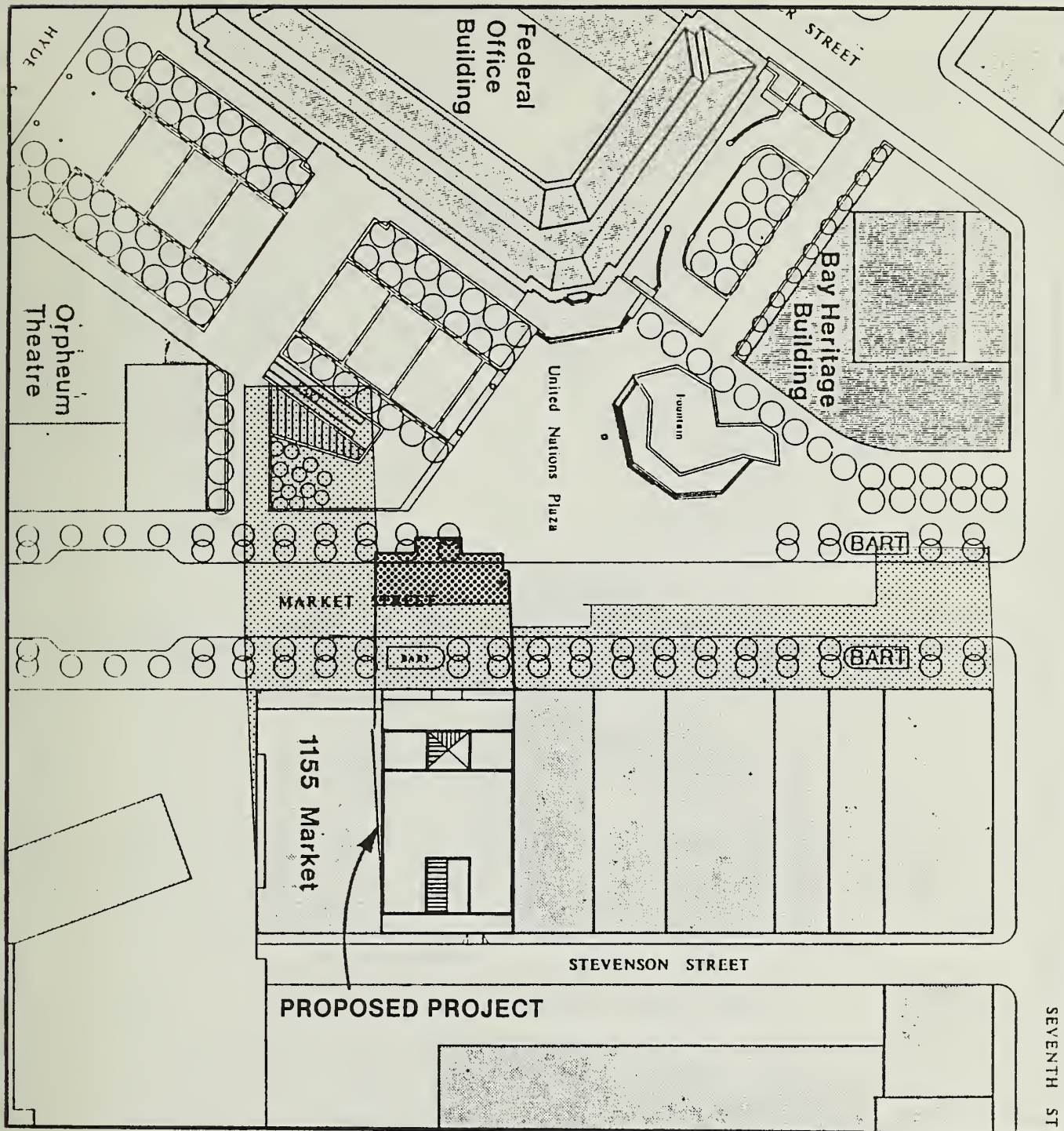
MARCH 21

TIME

9:00 AM PST



FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 5

-  EXISTING SHADOWS
-  SHADOWS ADDED BY ALTERNATIVE FIVE

DATE

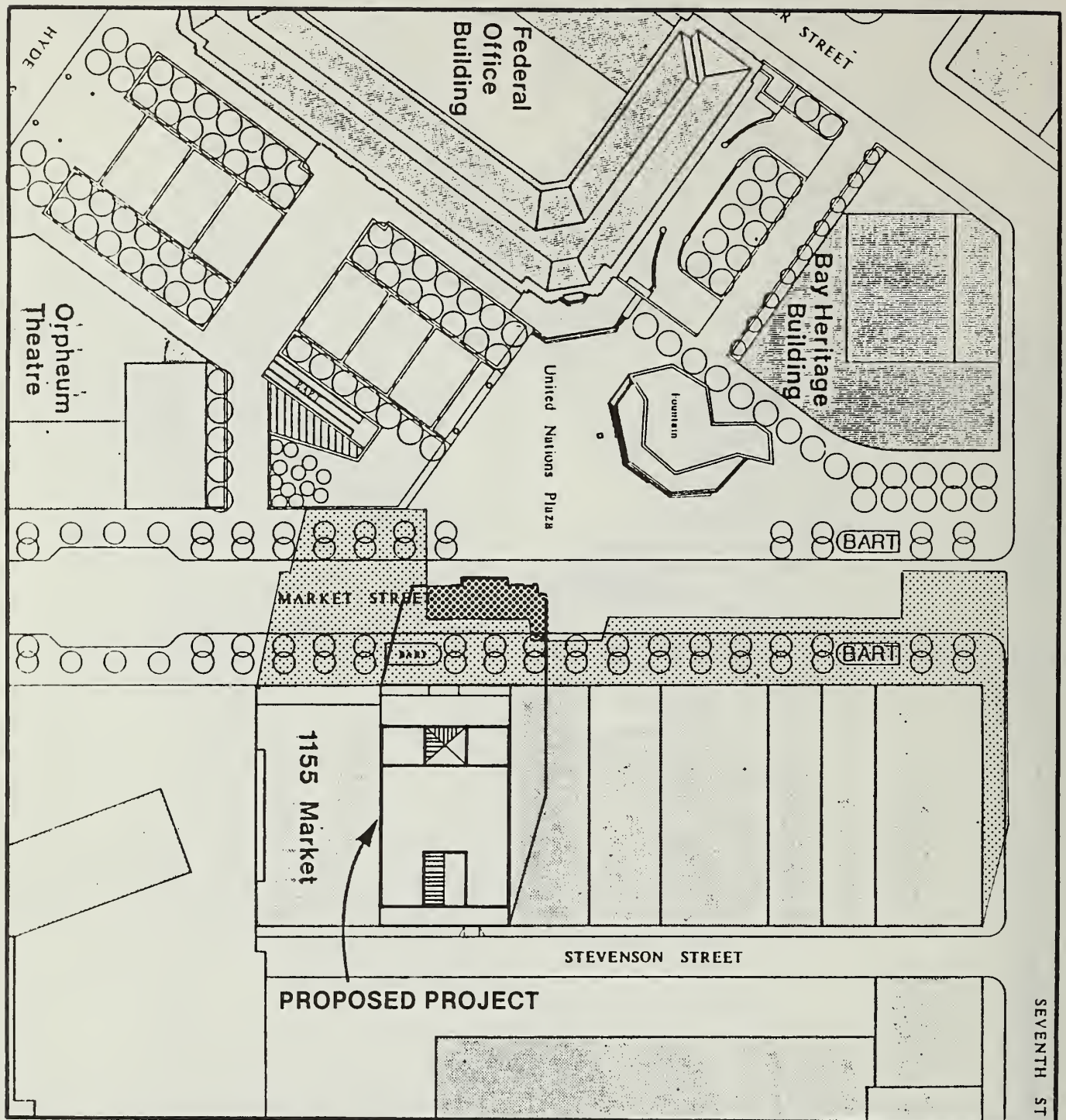
MARCH 21

TIME

10:00 AM PST

FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 6



EXISTING SHADOWS



SHADOWS ADDED BY
ALTERNATIVE FIVE

DATE

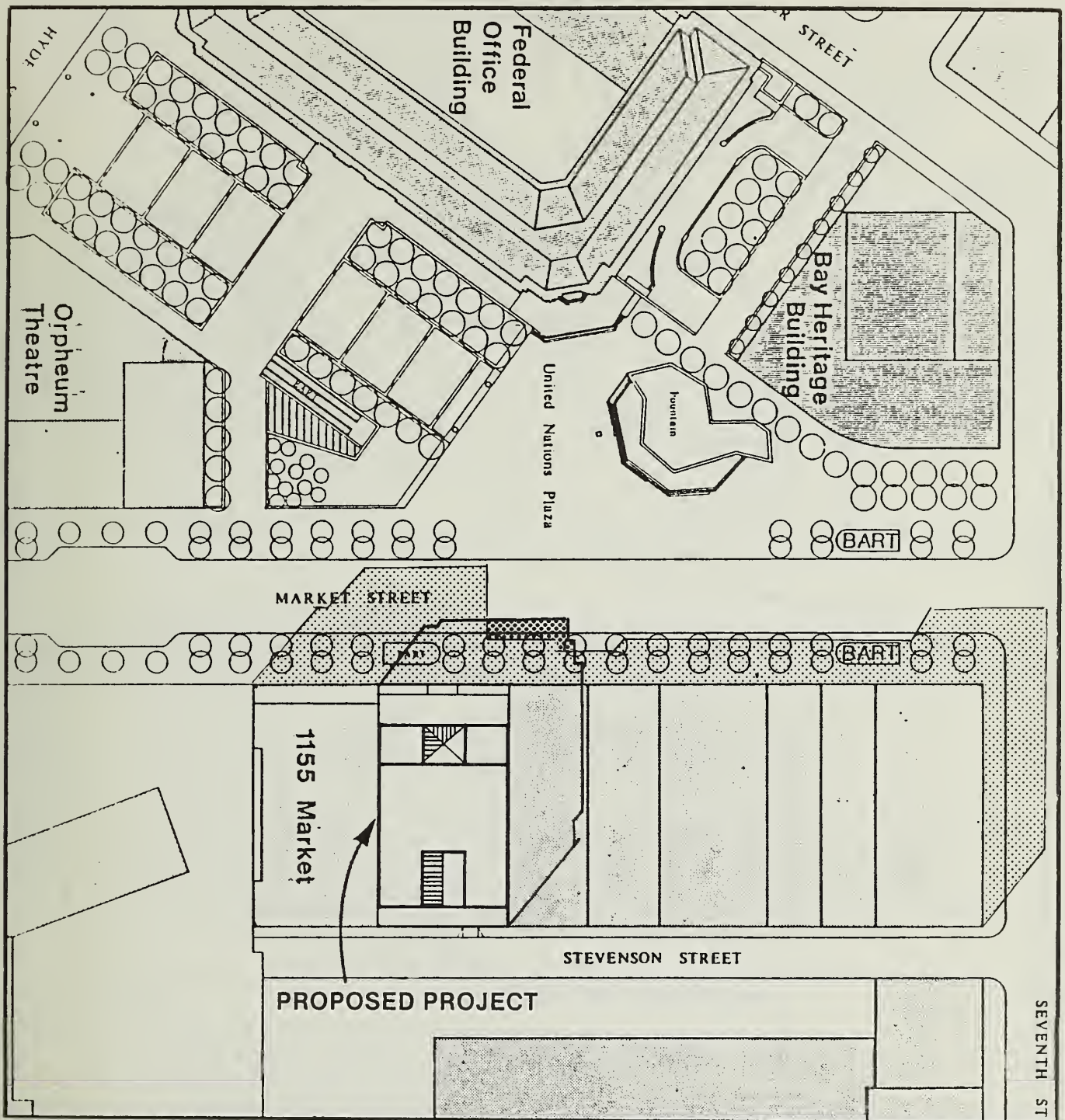
MARCH 21

TIME

11:00 AM PST

FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 7



EXISTING SHADOWS



SHADOWS ADDED BY
ALTERNATIVE FIVE

DATE

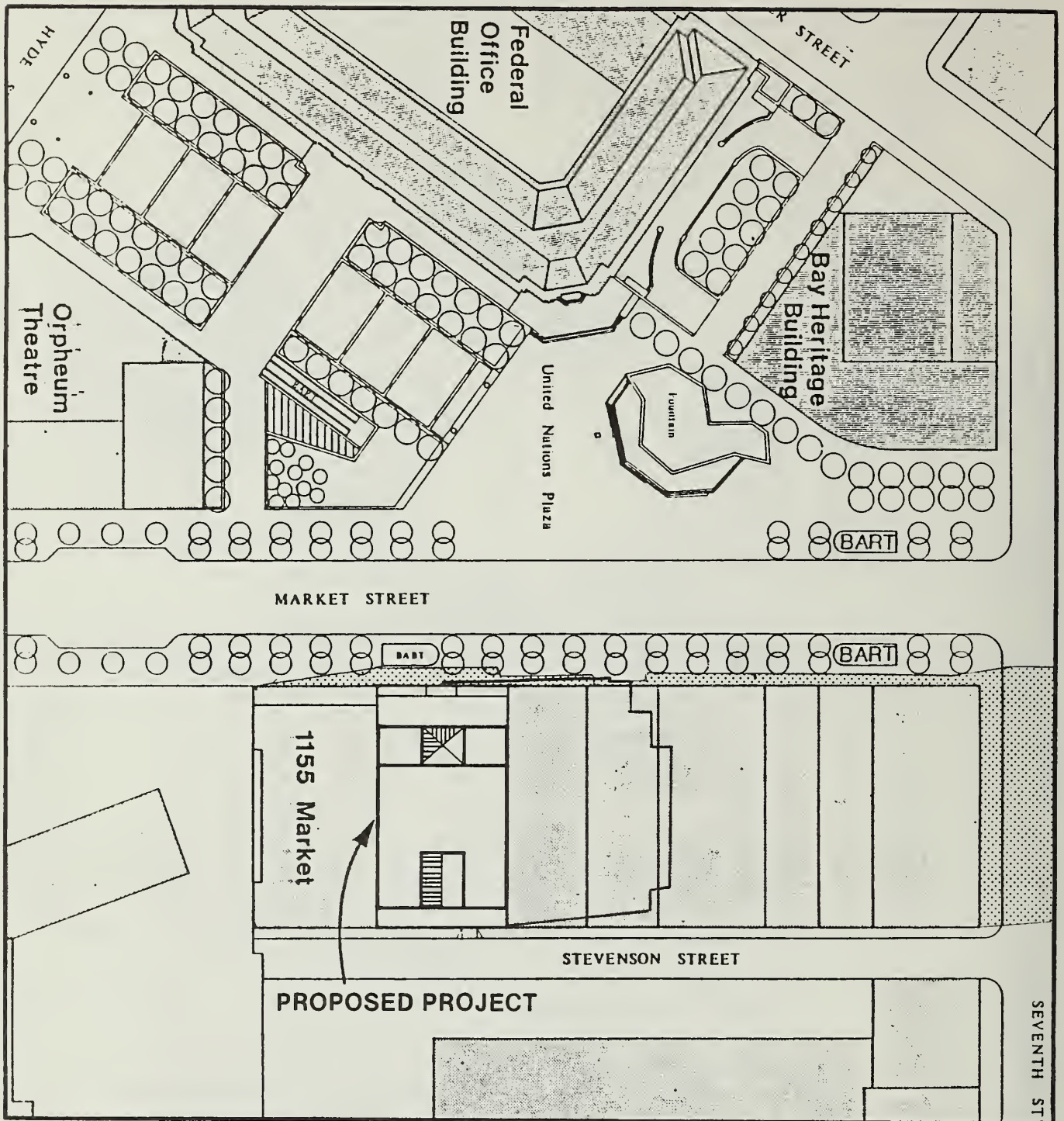
MARCH 21

TIME

12 NOON PST

FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 8



EXISTING SHADOWS



SHADOWS ADDED BY
ALTERNATIVE FIVE

DATE

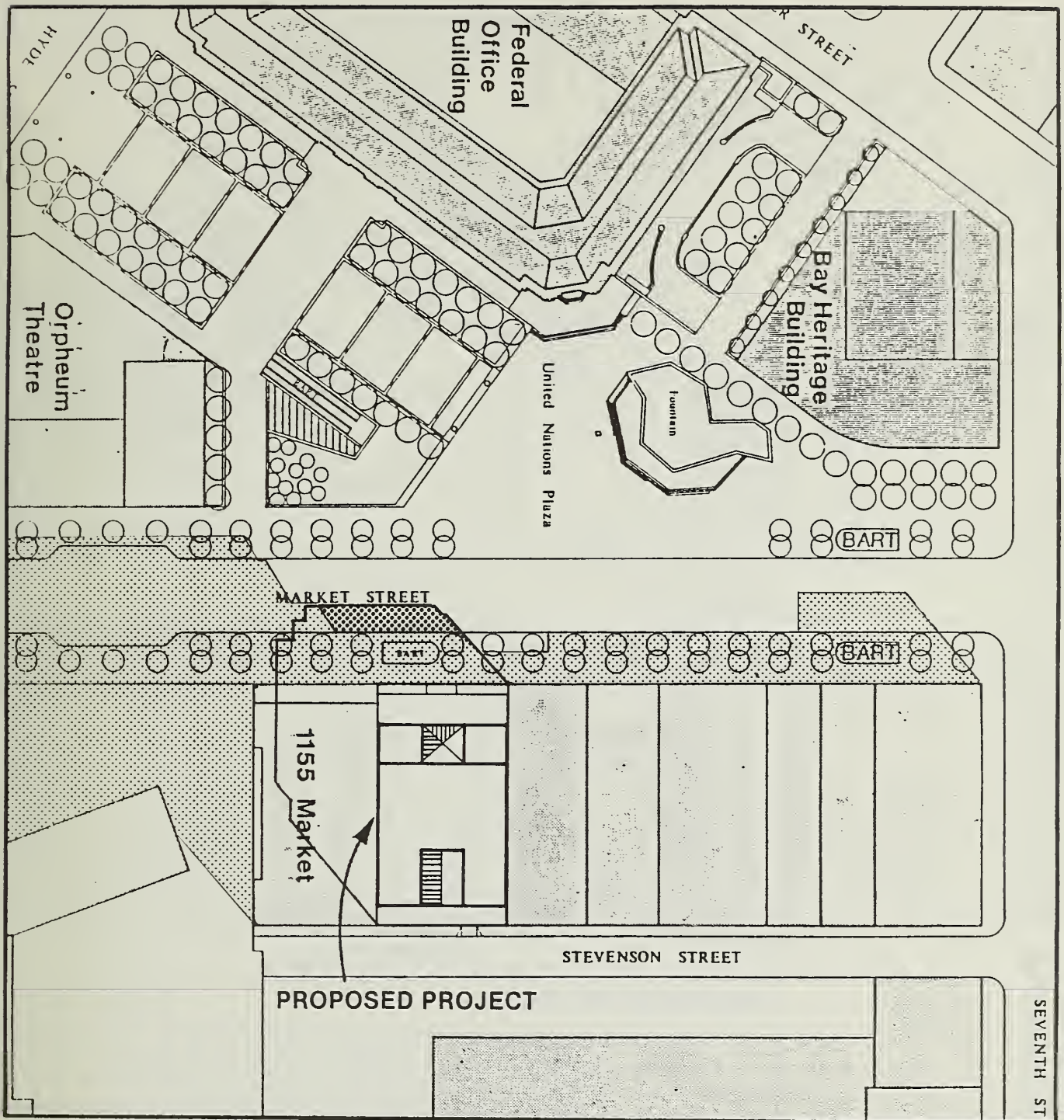
MARCH 21

TIME

2:00 AM PST

FEET 0 50 100 200





SEVENTH ST

Shadow Patterns : Alternative Five

FIGURE 9

- EXISTING SHADOWS
- SHADOWS ADDED BY ALTERNATIVE FIVE

DATE

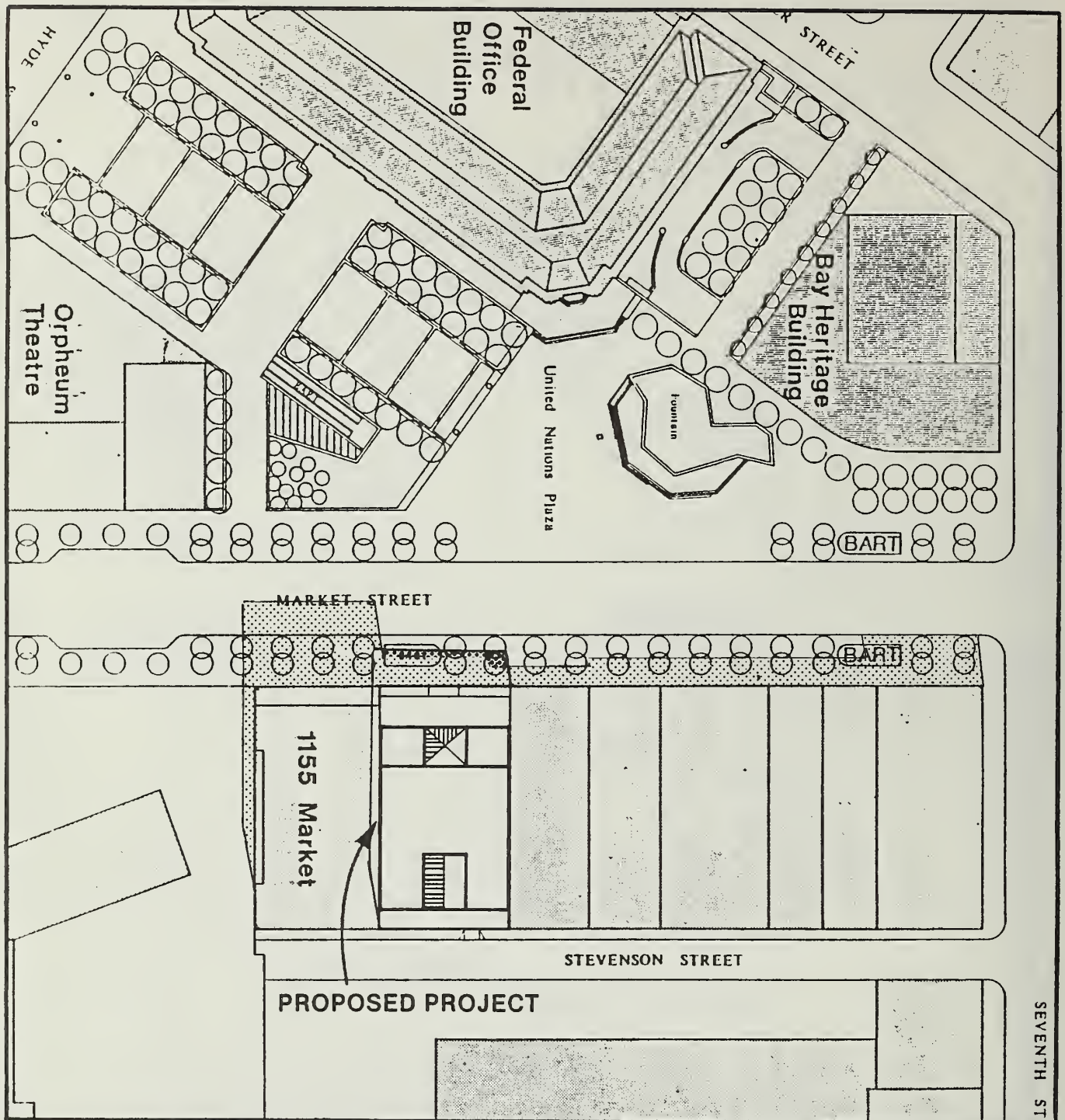
TIME

JUNE 21

10:00 AM PST

FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 10



EXISTING SHADOWS



SHADOWS ADDED BY
ALTERNATIVE FIVE

DATE

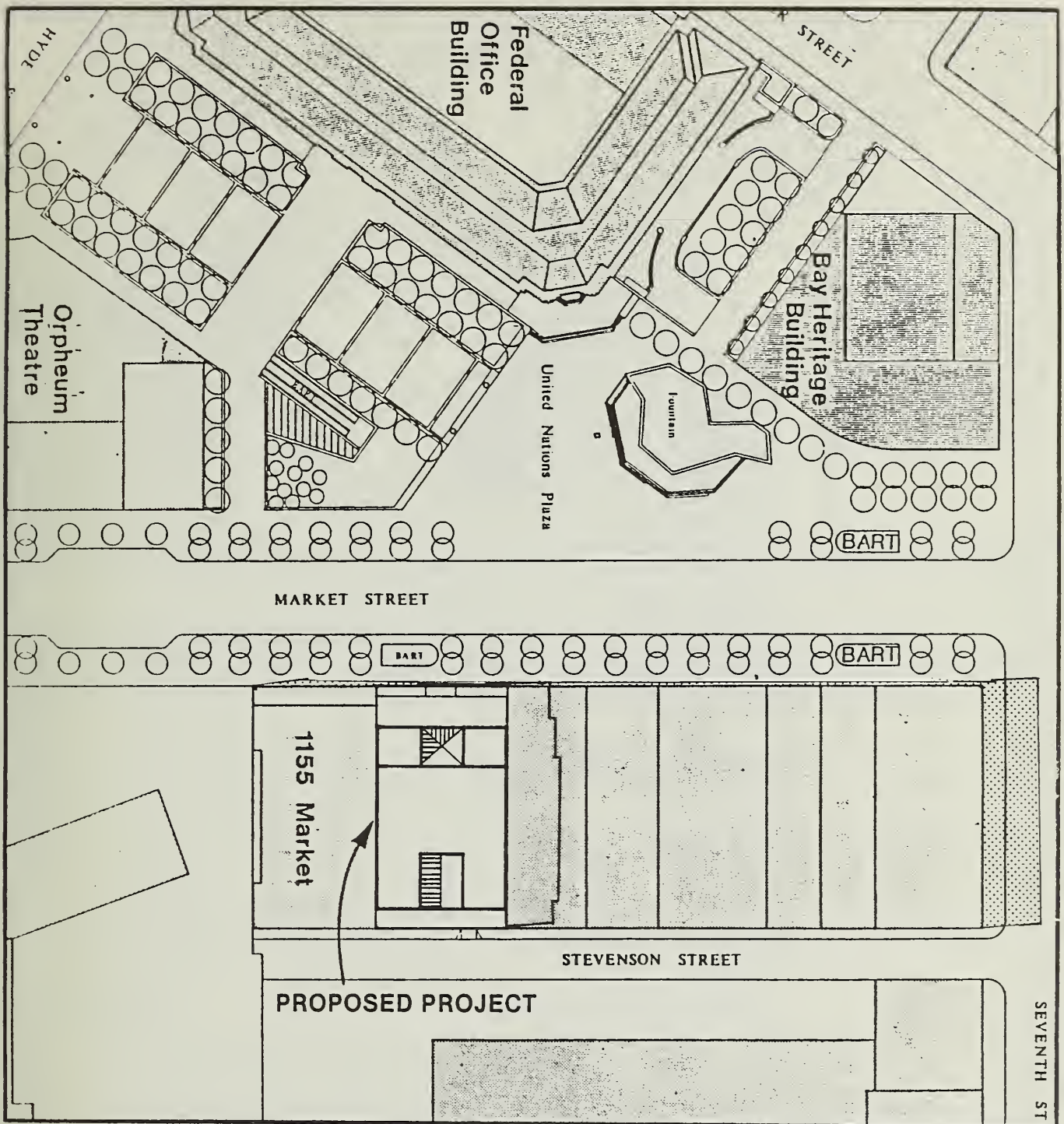
JUNE 21

TIME

12 NOON PDT

FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 11

- EXISTING SHADOWS
- SHADOWS ADDED BY ALTERNATIVE FIVE

DATE

JUNE 21



TIME

2:00 PM PDT

FEET 0 50 100 200



FIGURE 12

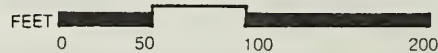
-  EXISTING SHADOWS
-  SHADOWS ADDED BY
ALTERNATIVE FIVE

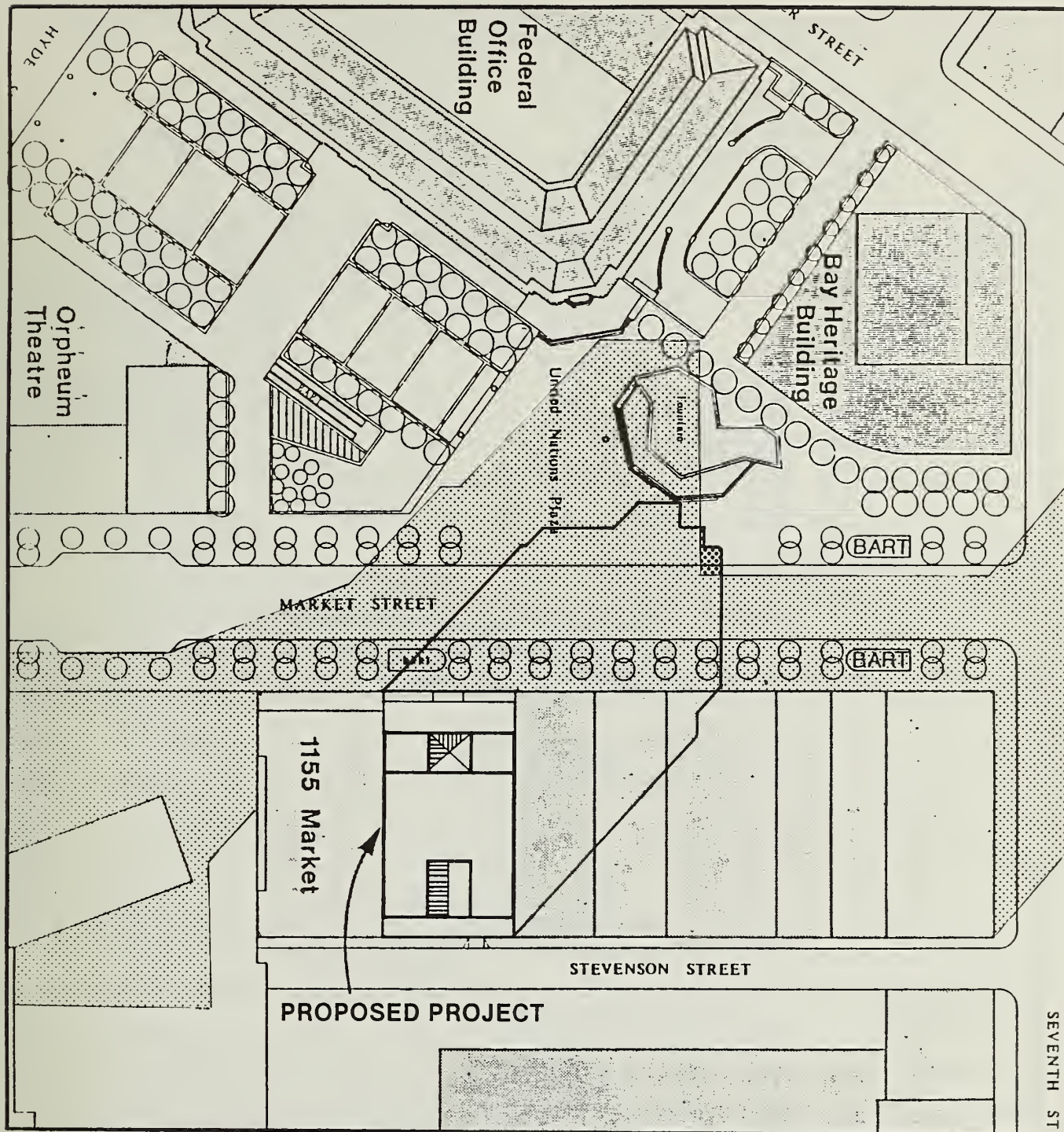
DATE _____

TIME

DECEMBER 21



10:00 AM PST





Shadow Patterns : Alternative Five

FIGURE 13

-  EXISTING SHADOWS
-  SHADOWS ADDED BY ALTERNATIVE FIVE

DATE

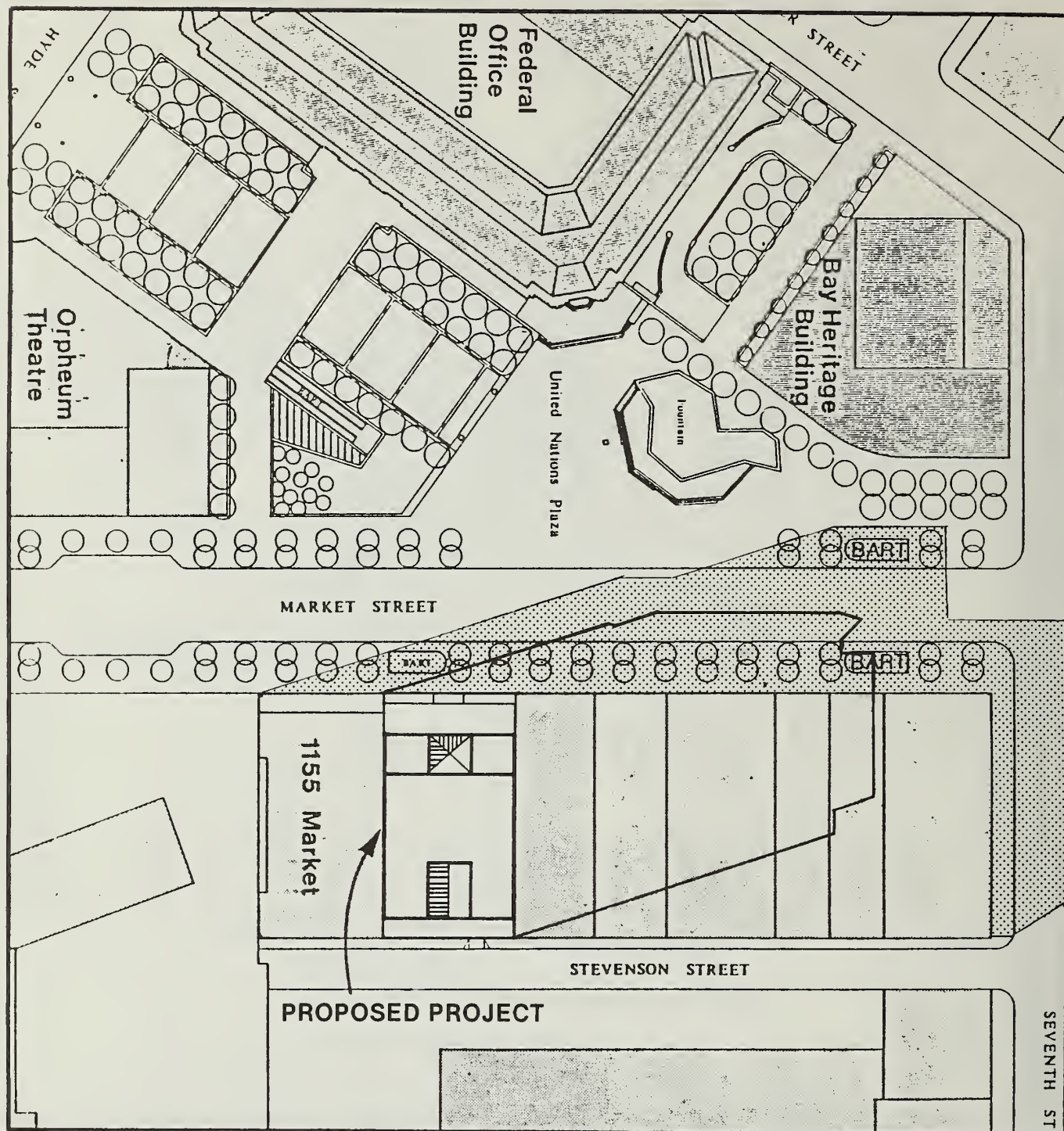
TIME

DECEMBER 21

12 NOON PST



FEET 0 50 100 200





Shadow Patterns : Alternative Five

FIGURE 14

-  EXISTING SHADOWS
-  SHADOWS ADDED BY ALTERNATIVE FIVE

DATE

DECEMBER 21

TIME

2:00 PM PST

FEET 0 50 100 200



J. EIR FORMAT

COMMENT

"It's not possible to read this summary and know what the changes are from original document. We certified original and should be given information to show what changes are, and why, and how much." (Sue Bierman)

RESPONSE

Appendix G, pages A-45 to A-53 of the SEIR, provides a summary comparison of the results of the cumulative impact analyses in the FEIR and the SEIR, where comparable. The following is added at the end of the second full paragraph on page 9:

"A summary comparison of the results of the cumulative impact analyses in the FEIR and the SEIR is included in Appendix G, pages A-45 to A-53."

COMMENT

"P. 11 Please state in the summary that the systemwide measures implemented by public agencies cannot be acted upon by the City and County of San Francisco and that the City's role is limited to Muni." (San Franciscans for Reasonable Growth)

RESPONSE

The SEIR (page 95) acknowledges that a number of the measures that could be implemented by public agencies, particularly those system-wide in nature, would require approval by decision-makers outside the City and County of San Francisco. These measures include measures to construct and maintain rail rapid transit lines from downtown San Francisco to suburban corridors and major non-downtown centers in San Francisco, and measures to fund Vehicle Acquisition Plans for San Francisco and regional transit agencies to expand non-rail transit service. Other measures can be acted upon solely by agencies within the City and County of San Francisco, including the provision of exclusive transit lanes on City streets, reducing incentives to drive by discouraging long-term parking, measures to encourage carpools, vanpools, and bicycle use, and measures to improve pedestrian circulation within downtown San Francisco. The first sentence of the third partial paragraph on page 10 is revised to read as follows:

"If the City and other local, regional, state and federal agencies were to adopt and implement the transportation improvements described in the Downtown Plan, or were to act to implement transportation mitigation measures described in Section V.E., Mitigation, pp. V.E. 4-28 of the Downtown Plan EIR, cumulative transportation impacts of downtown growth would be reduced."

IV. STAFF-INITIATED TEXT CHANGES

Page 25, paragraph one, revise the second sentence as follows (revisions are underlined):

"Three of the four prevailing winds, westerly, northwesterly, and west-northwesterly, blowing . . . "

● X. MODIFICATION TO THE AIR QUALITY ANALYSIS
OF THE DRAFT SUPPLEMENTAL EIR



DEPARTMENT OF CITY PLANNING 450 McALLISTER STREET • SAN FRANCISCO, CALIFORNIA 94102

CITY AND COUNTY OF SAN FRANCISCO

DEPARTMENT OF CITY PLANNING

**MODIFICATION TO THE AIR QUALITY ANALYSIS OF THE
DRAFT SUPPLEMENTAL
ENVIRONMENTAL IMPACT REPORT**

1145 MARKET STREET

OFFICE BUILDING

81.549E

Publication Date: June 20, 1986

Written Public Comment Period: June 20 to July 11, 1986

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I INTRODUCTION

This modification of the air quality analysis in the Draft Supplemental Environmental Impact Report for the 1145 Market Street Office Building (81.549E) has been prepared to provide additional information about the air quality effects of the proposed project.

An EIR on the project was published on May 20, 1983 and certified October 20, 1983. A Draft Supplemental EIR (SEIR), which modified and supplemented the original Final EIR analyses of the cumulative effects of the proposed project on transportation, air quality, energy and housing, was published on August 9, 1985. The public comment period on the Draft SEIR was from August 9 to September 12, 1985.

As part of the Office of Environmental Review's ongoing communication with the Bay Area Air Quality Management District (BAAQMD), on April 18, 1986, OER wrote to BAAQMD regarding the problem of unquantified future carbon monoxide (CO) emission reductions from the Vehicle Inspection and Maintenance (I/M) program and whether it would be appropriate to use the latest California Air Resources Board (ARB) emission factors. On May 5, 1986, the BAAQMD responded that as part of its ongoing program of examining changing air quality conditions in the Region, it had modified the ARB emission factors to reflect emission reductions expected from the I/M program and that the City was encouraged to use these values.

Based on the above, OER directed its consultants to begin using these new emission factors in future carbon monoxide (CO) analyses, including the response to a comment on this Draft SEIR which requested additional CO modeling. Inclusion of the new factors accounts for CO reductions previously estimated in the Draft SEIR at about 18% but not taken into account in the CO model (Draft SEIR, p. 75). Since calculation of this reduction is now possible, OER does not believe that it would be appropriate to withhold this

calculation and continue to identify the unquantified CO reduction at about 18%. The CO model is the same model used in the Draft SEIR, only the emission factor inputs have been changed to reflect the latest scientific information supplied to the City by BAAQMD.

This modification of the air quality analysis in the Draft SEIR incorporates these updated emission factors in the calculation of vehicle-related carbon monoxide impacts. As a result of this recalculation of carbon monoxide impacts, the Office of Environmental Review no longer believes the project or cumulative development, would result in significant carbon monoxide impacts under CEQA.

Chapter II, Environmental Impacts - Air Quality, which follows, replaces Section V.C, Impacts - Air Quality (pp. 71-78) of the Draft SEIR. These changes to pp. 71-78 are largely identical to those presented in the Draft Summary of Comments and Responses on the SEIR which was published June 5, 1985.

Other changes to the Draft SEIR to make other chapters consistent with the Impacts chapter should also be made, as follows.

In Chapter II, Summary the last sentence of the first paragraph on page 8 is deleted.

In Chapter VII. Significant Effects, the first paragraph on page 101 is replaced with the following:

Add a new section "B. Air Quality" as a new paragraph as follows:

"The project would contribute to possible violations of total suspended particulate standards."

II ENVIRONMENTAL IMPACTS — AIR QUALITY

Projected daily emissions of pollutants from project-generated traffic, and from cumulative development traffic (based on the March 22, 1985 list of Cumulative Office Development in Downtown San Francisco), are shown in Table 1, page 4. Table 1 also shows projected daily emissions in 1990 and 2000 for C-3 District development projected by the Downtown Plan EIR (EE81.3, certified October 18, 1984), and total emissions projected for the entire Bay Area by the 1982 Bay Area Air Quality Plan. The project would contribute about 0.7% to the total air pollutant emissions generated by cumulative list projects and two percent to the total emissions generated by downtown development in 1990, as projected by the Downtown Plan EIR.

Alternative 1 to the Downtown Plan (covered in the Downtown Plan EIR) would generate about 38% more emissions in 2000 (from development between 1990 and 2000) than would the Downtown Plan. Alternative 4 would generate about seven percent less emissions than would the Downtown Plan. Emissions generated by Alternatives 2, 3 and 5 would fall within this range. The types of air quality impacts under these alternatives would be the same as those under the Downtown Plan; their magnitude would vary in proportion to the differences in their emissions.¹

Nitrogen oxides (NO_x) and hydrocarbons (HC) are both chemical precursors of ozone. Motor vehicles emit more NO_x than HC, and the emissions from building natural gas combustion would consist primarily of NO_x. As demonstrated by the LIRAQ (Livermore Regional Air Quality model) regional ozone computer simulations performed for the 1982 Bay Area Air Quality Plan, an increase in the future NO_x emissions compared to HC emissions would lead to a decrease in ozone compared to present levels. This model has also shown that Bay Area ozone concentrations are expected to be within the federal standard in 1987, and thereafter. As the future NO_x emissions from cumulative

TABLE 1
PROJECTED DAILY POLLUTANT EMISSIONS

Pollutant	Emissions (tons per day) ¹					
	Project 1990 ²	Cumulative List 1990 ³	Downtown Plan ⁴		Bay Area ⁵	
			1990	2000	1990	2000
Hydrocarbons	0.01	1.5	0.6	0.6	428	428
Nitrogen Oxides	0.01	1.9	0.8	0.8	558	610
Carbon Monoxide	0.07	18.3	6.8	6.6	1,952	1,883
Particulates	0.01	2.9	1.1	1.3	562	649
Sulfur Oxides	0.001	0.22	0.1	0.1	194	233

¹Project, Cumulative List, and Downtown Plan emissions calculated using BAAQMD, EMFAC6C vehicular emission factors which do not take into account the Inspection and Maintenance program. Emissions of HC, NO_x, and CO include an assumed six minutes of idling time per vehicle trip. Emissions of TSP include dust disturbed from roadway surfaces.

²Based upon a weighted daily average of 4,000 miles traveled.

³Incremental emissions of downtown-area development are based on list of projected Cumulative Office Development in Downtown San Francisco as of March 22, 1985, (see Appendix B, Table B-2 pp. A-8 - A-11). By the year 2000 a larger portion of the motor vehicle pool will meet federal and state emission standards. Therefore, air quality impacts were analyzed under the list-based method for the year 1990, as opposed to the year 2000, in order to provide the most conservative assessment even though the impacts would not be fully realized until the mid-1990s.

⁴Incremental emissions of C-3 District development, per the Downtown Plan EIR, Table IV.I.2, p. IV.I.12.

⁵Cumulative total emissions of Bay Area development, per ABAG, BAAQMD, MTC, 1982 Bay Area Air Quality Plan, pp. 42, 53, and 112.

SOURCE: EIP Associates and Downtown Plan EIR

development in San Francisco would exceed future HC emissions, this development would not lead to an increase in total Bay Area ozone concentrations. This relationship between NOx and HC emissions would hold both under the cumulative list scenario and the Downtown Plan scenario shown.

At the same time, total emissions of both NOx and HC are expected to decrease in San Francisco. Total NOx emissions would decrease in San Francisco by about two percent from 1984 to 2000, but would increase in the Bay Area by about five percent from 1984 to 2000. It is possible that excess NOx emissions generated by cumulative development (including the project) could increase ozone and/or nitrogenous oxidant concentrations further downwind, outside the Bay Area. In addition, NOx emissions generated by cumulative development (including the project) throughout the Bay Area could increase acid rain further downwind, outside the Bay Area, though to a relatively small extent due to the magnitude of the increase and to dilution over time and distance.

In 1990 and 2000 (according to the Downtown Plan EIR), area-wide traffic volumes in the downtown area would increase by about 8% and 15%, respectively, over 1984 volumes; average traffic speeds would decrease by about one mph and two mph, respectively, from 1984 speeds. However, in 1990 and 2000 the average vehicle is expected to emit 32% and 43% less carbon monoxide (CO) respectively, than in 1984 due to ongoing state and federal emissions controls.

CO concentrations at 11 representative intersections in the downtown study area, as analyzed in the Downtown Plan EIR, would decrease from 1984 to 1990 and, thereafter, to 2000. CO concentrations at 10 of the 11 intersections would be within the state and federal standards in 1990 and 2000 under the Downtown Plan and the Alternatives. CO concentrations at one intersection (Brannan and Sixth Streets) would continue to exceed the state and federal eight-hour standards both in 1990 and 2000 under the Downtown Plan and the Alternatives. This suggests that additional intersections not selected for analysis in the Downtown Plan EIR might also exceed air quality standards.

The California State Legislature has mandated a biennial Inspection and Maintenance (I/M) program which applies to most cars and light trucks in California. This program went into operation in March 1984. Vehicles covered by the legislation must undergo a check consisting of a visual inspection of the vehicle's emission control system, measure-

ment of tailpipe emissions while the vehicle is idling and comparison of the measured emissions rates to the allowable limits for the appropriate year of manufacture and model of vehicle. Vehicles must have the required emission control equipment and must meet the specified standards for hydrocarbons and carbon monoxide. If required emissions control equipment is not present it must be installed. If all required equipment is in place but the vehicle's emissions exceed the standards, the owner is required to pay a maximum of \$50 for service intended to result in compliance.

An annual I/M program was evaluated in the 1982 Bay Area Air Quality Plan based on the 1979 source inventory. Based on predicted reduction in hydrocarbons and CO of 25% in covered vehicles, a reduction in total motor-vehicle generated CO of about 18% would be expected. The reduction in total regional CO emissions would be about 16%. The reduction in motor-vehicle generated hydrocarbons would be about 17%; the reduction in total regional hydrocarbon emissions would be about 6%. To account for these reductions, revised emissions factors have been used in the revised Modified Linear Rollback (MLR) model for this project.

Curbside CO concentrations at selected intersections that would be affected by project-generated traffic and by cumulative development traffic (based both on the March 22, 1985 cumulative list and on the Downtown Plan EIR growth projections) were projected for worst-case conditions, and are compared with ambient standards in Table 2, page 7. Although the emission factors differ from those used in the Downtown Plan EIR analysis in that these revised emission factors take the I/M program into account, these projections were calculated using a revised version of the MLR method which was developed for the Downtown Plan EIR.

The results indicate that the state and federal eight-hour CO standards would not be violated under 1990 or 2000 conditions under either the cumulative list or Downtown Plan scenarios at all three intersections studied. By not quantifying predicted reductions from the I/M program, CO emissions were overpredicted for the Downtown Plan EIR.

Emissions of total suspended particulates (TSP) resulting from construction and from vehicle trips generated by the project and cumulative development would increase TSP concentrations, which could increase the frequency of TSP standard violations in San Francisco, with concomitant health effects and reduced visibility.²

TABLE 2
EXISTING AND PROJECTED CURBSIDE CARBON MONOXIDE
CONCENTRATIONS AT SELECTED INTERSECTIONS

Intersection	Averaging Time	Concentrations (ppm) ¹			
		1984	Cumulative List 1990 ²	Downtown Plan ³	
6th/Brannan	1-hour	18.1	11.2	11.2	9.8
	8-hour	<u>13.4</u>	8.0	8.0	7.1
5th/Bryant ⁴	1-hour	16.2	10.4	10.4	9.3
	8-hour	<u>12.5</u>	8.0	7.9	7.0
8th/Bryant ⁴	1-hour	17.0	10.8	10.8	9.5
	8-hour	<u>13.4</u>	8.5	8.5	7.4

¹ Calculations for all scenarios were made using a revised version of the Modified Linear Rollback (MLR) method described in the Downtown Plan EIR. Background concentrations were calculated to be 7.4 ppm for one hour and 5.7 ppm for eight hours in 1984, 6.0 ppm for one hour and 4.5 ppm for eight hours in 1990, and 5.7 ppm for one hour and 4.1 ppm for eight hours in 2000. Underlined values are in excess of the state or federal CO standards. The one-hour state standard is 20 ppm, the one-hour federal standard is 35 ppm, and the eight-hour state and federal standards are 9 ppm. Emission rates were derived from the California Air Resources Board's EMFAC 6D computer model, as published in the BAAQMD's Guidelines, November 1985. These emissions take into account the reduction in CO as a result of the ongoing Statewide Inspection/Maintenance Program.

² Based on the list of projected Cumulative Office Development in Downtown San Francisco as of March 22, 1985 (see Appendix B, Table B-2, p. A-36). By the year 2000 a larger portion of the motor vehicle pool will meet federal and state emission standards. Therefore, air quality impacts were analyzed under the list-based method for the year 1990, as opposed to the year 2000, in order to provide the most conservative assessment even though the impacts would not be fully realized until the mid-1990s.

³ Based on the growth forecast methodology contained in the Downtown Plan EIR.

⁴ Includes effect of adjacent elevated freeway.

SOURCE: EIP Associates and Downtown Plan EIR

Emissions of sulfur oxides (SOx) generated by the project and by cumulative development would not bring San Francisco's sulfur dioxide (SO₂) concentrations measurably closer to violating the standard.

The 1982 Bay Area Air Quality Plan contains strategies which consist primarily of HC and CO emission controls on stationary sources and motor vehicles, and transportation improvements, and are aimed at attaining the federal ozone and CO standards. As discussed above, emissions associated with the project and with cumulative downtown development from the cumulative list or under the Downtown Plan are not projected by this EIR or the Downtown Plan EIR to increase ozone concentrations, and thus would not conflict with the objectives of the 1982 Bay Area Air Quality Plan regarding ozone. Cumulative downtown development had been projected by the Downtown Plan EIR potentially to result in a violation of the eight-hour CO standard at the Brannan/Sixth intersection analyzed therein. By using revised emission factors which account for the I/M program in the revised version of MLR contained in the Downtown Plan EIR, the City no longer predicts violations of CO standards at the Sixth and Brannan intersection or other intersections which have been modeled in the greater downtown. Based on the above, cumulative greater downtown development would not conflict with objectives of the 1982 Bay Area Air Quality Plan regarding CO.

The pollutant emissions and CO concentrations shown in Tables 1 and 2 were projected for 1990 on the basis of two different sets of future growth assumptions, with differing results. In one case, a list of specific projects proposed, approved, and under construction was used (see Appendix B, Table B-2, pp. A-8 through A-11). In the other case the employment growth trend approach of the Downtown Plan EIR was used, and those projections presented. In both cases, the method for air quality analysis was identical. However, the results using projected cumulative development are not directly comparable with those from the Downtown Plan EIR for several reasons.

First, it is reasonable to assume that the projected cumulative development on the list would be completed and the space it provides absorbed sometime between 1990 and 2000, (probably in the mid-1990s), rather than in either of those two analysis years which were used in the Downtown Plan EIR. The pollutant emissions and CO concentrations were calculated for 1990 using the cumulative list, even though those projects are not expected to be completed until the mid-1990s, in order to provide a comparison with the Downtown

Plan EIR results. However, this has the effect of artificially increasing the cumulative list results, because average-vehicle emission rates will decline with time, as a result of state and federal controls.

Second, the transportation analysis used for the Downtown Plan EIR differs from that used for the cumulative list, as described in the Transportation section of this report. Briefly, these differences include the fact that a cumulative list-based analysis assumes the same proportion of new employees would commute by private auto as is currently the case. In contrast, the Downtown Plan EIR analysis projects a shift of commuters from driving alone to carpool and transit, because commute routes such as the Bay Bridge are already at or near capacity and could not accommodate all of the vehicles that would be used if the proportion of persons driving alone to work remained constant.

Other reasons for the differences include the use in the cumulative list analysis of a constant regional distribution of trips, whereas the Downtown Plan EIR forecasts a declining percentage of new employees residing in San Francisco, and the lack in the cumulative list approach of discounting factors to account for trips between individual projects within the Downtown. Also the cumulative list applies to the entire downtown area, a larger geographical area than that analyzed in the Downtown Plan EIR, which contains specific forecasts for the C-3 District but also includes consideration of cumulative impacts of development outside the C-3 District.

Thus, total (regional) vehicle miles traveled and the resulting pollutant emissions projected using the cumulative list approach are considered artificially high. On a local intersection basis, traffic volumes and the resulting CO concentrations might or might not be higher with the cumulative list approach, depending on the particular location. This is because the cumulative list method does not distribute traffic on all the same streets in the same proportions as does the Downtown Plan EIR method.

¹Impacts anticipated from cumulative downtown development have been analyzed in the Downtown Plan Environmental Impact Report (EIR), (EE81.3, certified October 18, 1984). The air quality setting, impacts and alternatives discussion in the Downtown Plan EIR (Vol. 1, pp. IV.I.1-19 and VII.I.1-8; Vol. 2, pp. O.1-9; Vol. 3, part 1, pp. C&R-I, 1-11) is summarized in the text of this EIR and incorporated by reference herein.

²State particulate standards were adopted in 1983 to concentrate on fine particulate matter which has been demonstrated to have health implications when inhaled. Until the State adopts a method for monitoring fine particulate matter, it is not possible to determine what proportion of TSP in San Francisco would be subject to review against the new standards, whether new standards would be violated, or what the health implications would be.

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● **XI. SUMMARY OF COMMENTS AND RESPONSES TO
MODIFICATION OF AIR QUALITY ANALYSIS**

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CITY AND COUNTY OF SAN FRANCISCO

DEPARTMENT OF CITY PLANNING

SUMMARY OF COMMENTS AND RESPONSES

MODIFICATIONS TO THE AIR QUALITY ANALYSIS OF THE
DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT

81.549E

1145 MARKET STREET OFFICE BUILDING

July 24, 1986

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III COMMENTS AND RESPONSES

A. AIR QUALITY

COMMENT

Sue C. Hestor

"The overall problem with the air quality information is that there is not enough measuring going on to assess the real situation with air quality in San Francisco. It is a circular situation. There is not enough measuring, so the data shows no need for additional modelling. It is vital that monitoring, not just hot spot monitoring, be done in Downtown. A regular monitoring site should be set up in the C-3, near the Pacific Gas & Electric Building. Also, are you using information from the Ellis Street measuring site as well as from the site near Potrero Hill on Arkansas Street?

"6th and Brannan Study"

"This is a flawed study because it was conducted over the Christmas Holiday when the driving pattern are not "normal".

"The study took place from December 13, 1985 through December 28, 1985. Looking at a calendar for last year, four of the days are on the weekend and three more include Christmas Eve, Christmas itself, and the day after Christmas. Since many people take-off the week of Christmas, the 27 and 28 of December could probably be discounted as well. That leaves 7 days where there is "typical" traffic. At most there are 9 possible "typical" traffic days (the 27 and 28) and that would be generous. This study should be redone."

RESPONSE

The modification to the air quality analysis contained an updated carbon monoxide (CO) analysis using BAAQMD's revised emission factors. It did not incorporate data from the December 1985 CO "hotspot" monitoring program at Sixth and Brannan Streets.

Permanent CO monitors are located in San Francisco according to EPA standards which are intended to analyze area-wide conditions. They do not cover the highest CO concentrations (hot spots) in the City. "Hot spot" monitors are located on a temporary basis in areas where local CO concentrations are predicted to be high. The Bay Area presently has the densest network of CO monitors in the country. CO monitoring is the responsibility of the Bay Area Air Quality Management District (BAAQMD). There is no physical limit to the number of monitors that could be set up in San Francisco or the Bay Area. As a practical matter, the BAAQMD has set up the most intensive system of CO monitors in Bay Area communities with the worst CO problems; San Francisco is not one of these communities.

If decision makers in San Francisco believe that BAAQMD priorities result in an inadequate data base on which to predict CO emissions in San Francisco, the City could conduct monitoring downtown under the supervision of the BAAQMD. Such City-run monitoring programs are contingent on whether decision makers believe that they would be an appropriate priority for City funding.

The City requested that BAAQMD install CO "hot spot" monitors and traffic counters during December at locations projected to violate CO standards after 1987 (such as the intersection of Sixth and Brannan Streets). When the BAAQMD did not act on this request last winter, the City set up a short-term (two week) monitoring program at the Sixth and Brannan intersection.

At the present, CO data is available from ongoing CO monitors at Arkansas Street and Ellis Street. Data is also available from CO "hot spot" monitoring programs conducted in previous years. CO modelling in San Francisco uses the latest available scientific data and techniques, and is conducted by the City and consultants to the City, with input from the BAAQMD.

Data from the Ellis Street monitoring site has been used to predict the high 1984 baseline CO concentration of 13.4 ppm contained in the Modification to Air Quality Analysis of this Supplemental EIR. Data from the Arkansas Street site and previous data from the 23rd Street site are used by the BAAQMD for most of their reporting purposes, as these permanent sites were located according to EPA standards.

CO concentrations are affected by two major factors, meteorology and traffic conditions. Violations to CO standards generally occur on cold, still, winter evenings. The CO "hot spot" monitoring program conducted during the last two weeks of December 1985 provided actual CO emissions and traffic counts at the Sixth and Brannan intersection. These data can be analyzed in relationship to data obtained from permanent on-going monitors in the City.

The first reason for conducting this monitoring study during the Christmas season was to account for the high traffic volumes which generally occur before Christmas. For example, on Wednesday October 23, 1985, traffic volumes were counted during a peak three hour period at the Sixth and Brannan intersection. These traffic volumes can be compared to subsequent volumes counted in conjunction with the CO "hot spot" monitoring program conducted during December 1985. For the peak-hour, peak-direction counts there were about 4,360 trips counted on the October evening compared to about 4,100-4,660 trips counted on weekday evenings before Christmas Eve in December. For the three-hour peak-period, peak-direction counts, there were about 11,560 trips on the October evening compared to about 11,920-12,880 trips counted on weekday evenings before Christmas Eve. Thus, overall traffic volumes during the peak three hour period were greater during the December counts than during the October counts. With the exception of the December 1985 two-week period, no 24-hour traffic counts are available for the Sixth and Brannan intersection.

The second reason for monitoring CO during the Christmas season was to compare CO emissions during the relatively higher traffic volumes before Christmas with the CO emissions during the relatively lower traffic volumes on and after Christmas. It was

anticipated that a relationship between traffic volumes and carbon monoxide emissions would be observed. What is termed a "flawed study" by the commenter was a purposeful decision by air quality planners to provide specifically desired data for analysis.

The third reason for monitoring CO in December was that the worst CO problems generally occur during cold, still, winter nights. Most CO "hot spot" monitoring is conducted from December through February. Meteorological conditions are not always predictable. For example, in 1985 the worst episodes of CO in San Francisco, as measured at the permanent monitoring stations, occurred in October and November. In mid-December, 1985, before the monitoring program began, meteorological conditions were predicted for the remainder of the month to be the type of conditions that are normally associated with adverse CO concentrations. Thus, by conducting the monitoring program during the Christmas season, the City was able to monitor both during adverse meteorological and adverse traffic conditions.

Even though the "hot spot" monitoring program did not occur during the worst CO conditions which occurred in October and November of 1985, the data from such programs can give us additional information about the relationship between air quality conditions at locations with the most severe CO concentrations and area-wide CO conditions. This will make possible a reasonable prediction for CO values at the Sixth and Brannan intersection. The more monitoring that is conducted in the City, the better the actual data base will be for local CO analysis. The City continues requesting that BAAQMD conduct additional CO monitoring in San Francisco.

COMMENT

Sue C. Hestor

"Two additional points. The State emission program does not include trucks and buses. These vehicles add to the degraded air quality and should be assessed in the information.

Second, there needs to be measuring of particulate matter on the street level. This is what people are breathing."

RESPONSE

The commentor is generally correct in stating that the Vehicle Inspection and Maintenance (I/M) program does not include trucks and buses. It does include light duty pickup trucks and vans. Emissions from all sources, including all trucks and buses are considered in the California Air Resources Board emission factors. When the BAAQMD adjusted State emission factors to account for the I/M program, they adjusted only the emission factors of light duty vehicles covered by the I/M program. They did not adjust the emission factors of vehicles not covered by the I/M program.

This Modification to Air Quality Analysis of the Supplemental EIR did not change the Supplemental EIR discussion on particulate matter. As stated in Note 2 on page 78 of the SEIR:

"State particulate standards were adopted in 1983 to concentrate on fine particulate mater which has been demonstrated to have health implications when inhaled. Until the State adopts a method for monitoring fine particulate matter, it is not possible to determine what proportion of TSP in San Francisco would be subject to review against the new standards, whether new standards would be violated, or what the health implications would be."

Previous State standards were based on total suspended particulates (TSP). TSP is a localized problem occurring primarily during excavation, demolition, and construction activities. Mitigation measures to control construction dust (such as the twice-daily watering of the construction site included as mitigation in the Initial Study for this EIR) help to settle out the TSP from the atmosphere. Fine particulate matter under ten microns in size (PM₁₀) is an area-wide problem, as fine particulate matter does not settle out of the atmosphere as quickly as large particulate matter.

The BAAQMD has recently been monitoring fine particulate matter in San Francisco, although data from these local monitors is not yet available.*

* Conversation with Thomas Perardi, Manager, Resources and Planning Division, BAAQMD, July 14, 1986.

COMMENT

Sue Hestor

"Downtown Plan EIR

"The projections of air quality are based on assumptions of the Downtown Plan EIR. In particular it is based on the completion of the MUNI Metro Turnaround and higher fuel prices. Gas prices are low and more people are driving. This fact needs to be factored into the projections. As for the Turnaround, information should be factored in as well. The Turnaround is behind schedule. This delay is contrary to the modal shift assumption in the Downtown Plan because a key part of accommodating the shift is the completion of the Turnaround (and "breakout" for the other lines). In the meantime people bring their cars downtown rather than endure the perceived problems with the Metro."

RESPONSE

The Muni Metro turnaround is the second highest transit priority in the Bay Area and is proceeding on schedule.¹ (The Daly City Bart turnback, now under construction, is the first priority according to MTC.) An Environmental Impact Study and preliminary engineering report for the turnaround are underway. Muni is in the process of reevaluating its five-year plan. Some changes can be expected in the latest plan. Exactly what those changes will be are not yet known. The five-year plans of the five other transit agencies serving San Francisco are generally proceeding according to schedule with the exception of A.C. Transit, which is facing a deficit. This could cause reductions in service regardless of targets in the five-year plan. To what extent the deficit will affect service is not known at this time. (The Downtown Plan EIR assumed that A.C. Transit Transbay Service would not increase over time, but would remain constant at 1984 levels.)

Gasoline prices can cause some fluctuation between transit and auto use. However, if the implication in the comment is that the oil price drop means that massive number of additional cars will cross the Bay Bridge, the suggestion is not correct and was not and should not have been considered in the Downtown Plan EIR or this project EIR. The Bay

Bridge has been at capacity for many years. There is always a "push-pull" relationship between traffic congestion and transit ridership: driving may appear more attractive if fuel prices drop. However, length of time of commute is an additional major factor (see Downtown Plan EIR Responses Section E.1.4.2, pp. C&R-E.13-15). As more drivers appear on the Bridge, causing longer backups, others decide to carpool or use transit, reducing the auto pressure. There is always going to be a driver to fill up the "space" left by a shift to transit or carpooling. However, there is a limit to the amount of back up that will be tolerated by commuters when transit is available. This fluctuation is part of the modal shift assumptions in the Downtown Plan EIR transportation analysis.

¹Ron Niewiarowski, Project Manager, Muni, telephone conversation, July 16, 1986.

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New World Office Building
20 Salisbury Road, #608
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San Francisco Real Estate Dept.
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San Francisco, Ca 94102
Attn: Wallace Wortman, Director of
Property

M + B Development
c/o Haig G. Mardikian
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San Francisco, CA 94108

● XIV. CERTIFICATION MOTION

File No: 81.549E
Address: 1145 Market Street
Motion No: 10764

SAN FRANCISCO

CITY PLANNING COMMISSION

MOTION NO. 10764

ADOPTING FINDINGS RELATED TO THE CERTIFICATION OF A FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR A PROPOSED OFFICE BUILDING LOCATED AT 1145 MARKET STREET (the "Project").

MOVED, That the San Francisco City Planning Commission ("Commission") hereby CERTIFIES the Final Supplemental Environmental Impact Report ("FSEIR") identified as 81.549E "1145 Market Street Project," based upon the following findings:

1. The Commission, by Motion No. 9836, adopted on October 20, 1983, found that the Final Environmental Impact Report ("FEIR") prepared in connection with the Project was adequate, accurate and objective certified its completion in compliance with the California Environmental Quality Act ("CEQA") (Cal. Pub. Res. Code Section 21000 et seq.), and the State CEQA Guidelines (14 Cal. Admin. Code Section 15000 et seq.) and Chapter 31 of the San Francisco Administrative Code ("Chapter 31").
2. On October 20, 1983, the Commission by Motion No. 9837 approved the Project site permit application. On October 22, 1984, an appeal of the site permit was filed with the Board of Permit Appeals.
3. In view of the fact that one year had passed between Certification of the FEIR and an appeal of the site permit and new information had become available in the certified Downtown Plan EIR during that time, the Department of City Planning ("Department") thought that the cumulative analysis in the subject project EIR was out of date; therefore, the Department requested and the Board of Permit Appeals agreed, to continue a hearing on the appeal pending completion of a Supplemental Environmental Impact Report.
4. A Draft Supplemental Environmental Impact Report with respect to the Project ("DSEIR"), dated August 9, 1985, was prepared by the Department.
5. In preparing the DSEIR, the Department fulfilled all procedural requirements of CEQA, the State CEQA Guidelines and Chapter 31 by the following procedures:
 - a. On August 9, 1985, the Department published the DSEIR and provided notice to the public in a newspaper of general circulation of the availability of the DSEIR for public review and comment and of the date and time of the Commission's public hearing on the DSEIR. This notice was mailed to the Department's list of persons requesting such notice.
 - b. Notices of availability of the DSEIR and of the date and time of the public hearing were posted near the project site by Department staff on August 9, 1985.

CITY PLANNING COMMISSION

File No: 81.549E
Address: 1145 Market Street
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Page Two

- c. On August 9, 1985, copies of the DSEIR were mailed or otherwise delivered to a list of persons requesting it, to those noted on the distribution list in the DSEIR, to adjacent property owners, and to other government agencies; the latter both directly and through the State Clearinghouse.
- d. The State Clearinghouse provided a 30-day public review period from August 9, 1985 to September 12, 1985.
7. The Commission held a duly advertised public hearing on the DSEIR on September 12, 1985, at which opportunity was given for, and public comment was received on, the DSEIR. The period for receipt of written comments on the DSEIR ended September 12, 1985.
8. The Department prepared responses to comments on environmental issues received at the public hearing and in writing during the 30-day public review period, prepared additions to the text of the DSEIR in response to comments received or based on additional information that became available during the public review period, and corrected errors in the DSEIR. This material was presented in a "Draft Summary of Comments and Responses," published on June 5, 1986, was distributed to the Commission and to all parties who commented on the DSEIR, and was available to others upon request at Department offices.
9. On June 20, 1986, the Department prepared a Modification to the Air Quality Analysis of the DSEIR, which contained new information about the carbon monoxide impacts of cumulative downtown growth. This material was circulated to the Commission, persons who had commented on the DSEIR, and interested parties. Written comments on these Modifications were accepted between June 20, 1986 and July 11, 1986. Responses to the comments received were presented on July 24, 1986 to the Commission and to all parties who commented on the Modifications, and were available to others upon request at Department offices.
10. The FSEIR has been prepared by the Department. It is based upon the DSEIR and consultations and comments received during the review process, additional information that became available, the Summary of Comments and Responses, additional information presented in the Modifications to the Air Quality Analysis of the DSEIR, and comments received on those Modifications, all as required by law.
11. Project environmental impact report files have been made available for review by the Commission and the public, and these files are part of the record before the Commission.
12. On July 31, 1986, the Commission reviewed the FEIR and the FSEIR and found that the contents of said reports and the procedures through which they were prepared, publicized and reviewed all comply with the provisions of CEQA, the State CEQA Guidelines and Chapter 31.
13. The Commission finds that the FSEIR considers and evaluates cumulative impacts of the project described therein using two methodologies: a methodology based on a list of current and reasonably foreseeable future projects, as well as an evaluation of the Project impact in light of cumulative analyses prepared for the Downtown Plan in the EIR on that plan.

CITY PLANNING COMMISSION

File No. 81.549E
Address: 1145 Market Street
Motion No. 10764
Page Three

14. The Commission finds that the FSEIR concerning 81.549E, "1145 Market Street Project" is adequate, accurate and objective, and that the Summary of Comments and Responses contains no significant revisions to the DSEIR, and does hereby CERTIFY THE COMPLETION of the FEIR and said FSEIR as being in compliance with CEQA, the State CEQA Guidelines, Chapter 31.
15. The Commission in certifying the completion of said FSEIR does hereby find that the project would have a significant effect on the environment in that it would contribute to cumulative impacts in the following respects: an increase in transit ridership and pedestrian and vehicular traffic and parking, and possible violations of total suspended particulate standards, all as produced by this and other closely related and reasonably foreseeable probable future projects.

I hereby certify that the foregoing Motion was ADOPTED by the City Planning Commission at its regular meeting of July 31, 1986.

Lori Yamauchi
Commission Secretary

AYES: Commissioners Allen, Karasick, Nakashima, Wright, Rosenblatt

NOES: Commissioner Bierman

ABSENT: Commissioner Hemphill

ADOPTED: July 31, 1986

0060E/003E

APPENDICES

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RECEIVED
JUN 24 1985
EIP

June 21, 1985

Brian Boxer
E.I.P.
319 11th Street
San Francisco, CA 94103

Dear Mr. Boxer:

This letter is in response to a request from Mr. Marc Dragun for confirmation of the continuation of the appeal of Building Permit Application No. 8200517 by San Franciscans for Reasonable Growth.

On December 12, 1984, the Board of Permit Appeals continued the public hearing on this matter until the completion and certification of a Supplemental Environment Impact Report (S.E.I.R.) for the 1145 Market Street Project.

If there are any questions concerning this matter, please call met at (415) 558-4421.

Yours truly,

A handwritten signature in dark ink, appearing to read "Robert H. Feldman", written over a horizontal line.

Robert H. Feldman
Executive Director

RHF/jr

cc: Marc Dragun, Knox & Cincotta
Sue Hestor, Esq., San Franciscans For Reasonable Growth
Barbara Sahm, Department of City Planning

KNOX & CINCOTTA
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December 12, 1984

LAURA R. SWARTZ
LAURENE WU MCCLAIN

Mr. Robert Passmore
Zoning Administrator
Department of City Planning
450 McAllister
San Francisco, CA 94102

Re: 1145 Market Project

Dear Mr. Passmore:

This letter is intended to set forth our understanding that the Board of Permit Appeals action, Hearing of Appeal No. 84-269, has been continued indefinitely until a Supplemental Environmental Impact Report (SEIR) has been completed.

If this is your understanding then we must meet immediately to determine what the context of the SEIR is and the schedule for its production.

Please contact me immediately to confirm these understandings.

Very truly yours,


David P. Cincotta

DPC:mc

cc: Ms. Claire Pilcher
Richard Guggenhime,
Chairman Board of Permit Appeals

The attached list of office and retail projects was prepared as a background document for a land-use-based method of analyzing cumulative impacts. A land-use-based cumulative analysis is one of the two methods of cumulative analysis suggested by the CEQA Guidelines (Section 15130(b)(1)(A)), whereby a list of related projects is used to determine the combined effects of the whole and to determine the contribution of the proposed office or retail project to the overall cumulative effect. This is only one method of determining cumulative impacts. The other method of determining cumulative impacts is an analysis based on estimates of total employment projected for the area. This latter method is permitted by CEQA Guidelines Section 15130(b)(1)(B) if the employment projections are based on an appropriate planning document.

The attached cumulative list is an updated version of past lists and includes all office and large retail projects proposed, approved, under construction and recently completed in the greater downtown area which have active applications in the Department of City Planning. This list is appropriate for use only in a land-use-based analysis of the cumulative impacts of office and retail projects in the greater downtown.

Relevant San Francisco Redevelopment Agency projects have been included on the list. Where single buildings or sites are involved they are listed by Assessor's Block. Larger projects covering several blocks are at the end of each list. Redevelopment Agency projects for which no developer participation agreement has been signed are listed as "under formal review." Those for which developer participation agreements have been signed are listed as "approved."

The 621,000 square feet of office space listed as "under formal review" in the Yerba Buena Center Redevelopment Area includes 460,000 s.f. in a project at the northeast corner of Third and Mission Streets, 40,000 s.f. in a project at the northwest corner of Fourth and Clementina, 85,000 s.f. at the northeast corner of Lapu-Lapu and Harrison, and 36,000 s.f. at the southeast corner of Third and Harrison. The 1,250,000 s.f. of office and 201,000 s.f. of retail listed as "approved" in Yerba Buena Gardens includes 750,000 s.f. of office and 100,000 of retail in a project on Market Street between Third and Fourth Streets, 500,00 s.f. of office and 10,000 s.f. of retail at the southeast corner of Third and Mission, 80,000 s.f. of retail in a project bounded by Mission, Howard, Third and Fourth Streets, and 11,000 s.f. of retail in a project bounded by Howard, Folsom, Third and Fourth. The 480,000 s.f. identified as "approved" in Assessor's Block 3735 includes two projects, 95 Hawthorne with 360,000 s.f. of office and the 120,000 s.f. PacTel project at the northeast corner of Third and Folsom. (Source: Mike Mann, San Francisco Redevelopment Agency)

The 635,000 s.f. of office and 185,000 s.f. of retail space shown on the list as "approved" in the Rincon Point/South Beach project includes 450,000 s.f. of office and 120,000 s.f. of retail space on the Rincon Annex site on Mission

Street between Steuart and Spear Streets (Site B), 35,000 s.f. of office and 5,000 s.f. of retail space in a project at Beale and Bryant Streets (Site D) and 150,000 s.f. of office space and 60,000 s.f. of retail space in a project bounded by Brannan, Townsend, Kelly and First Streets (Site I). (Source: Barbara Amato, San Francisco Redevelopment Agency)

Other jurisdictions were also contacted. The 293,300 s.f. State Office Building under construction at Van Ness and McAllister and the proposed 226,880 s.f. State Office Building at Larkin and Golden Gate are included on the list. No new federal office space is currently proposed in downtown San Francisco. (Source: Molly Brand, General Services Agency)

Hotel projects have not been included in the list because hotel uses have different peaking characteristics from office buildings and generally do not significantly affect peak-hour traffic or transit. Therefore they do not contribute to effects such as maximum production of air pollutants (see 135 Main Final Supplemental EIR, EE81.61, certified November 30, 1982, p.150). Residential projects have not been included for a number of reasons. Residential uses are extremely limited in the study area and generally are unrelated to office uses. Residential travel in the downtown usually takes place in the contra-commute direction during peak hours and thus does not contribute to cumulative traffic or transit congestion. In addition, office trips in the p.m. peak period are assumed to be made by workers traveling to their residences, while trip generation calculated for residential uses includes persons returning to their homes after work during the p.m. peak. Including residential uses in the cumulative analysis would double count some travel generated by projects on the list: once when employees left their office buildings and again when they arrived at their downtown residences.

Approximately 1.4 million square feet of office space has been proposed or recently approved for locations outside the greater downtown area. There are six projects over 10,000 square feet. San Francisco Executive Park, just east of U.S. 101 near the southern border of San Francisco, is proposed for about 1.1 million square feet; St. Mary's Medical Office Building on Shrader at Fulton is proposed at 90,000 s.f.; the Nineteenth and Taraval project would contain 27,400 office s.f.; a conversion of an existing building at 2185 Folsom would contain 31,500 s.f. of office space; a 70,000 s.f. medical office building is proposed at Mt. Zion Hospital; the proposed mixed-used project at California and Steiner Streets would contain 19,000 s.f. of office space. A number of smaller projects containing new office space is also proposed. Projects outside of the greater downtown are not included on the cumulative list because their impacts do not accumulate measurably with office space in the downtown area. Although the Executive Park proposal would contribute to the auto traffic on U.S. 101, the critical analysis points for p.m. peak-period cumulative downtown traffic on U.S. 101 are the freeway entrances near downtown, the approaches to the Bay Bridge, and the Alemany interchange which restricts southbound U.S. 101 traffic in the p.m. peak period. Executive Park traffic would not contribute measurably to peak demands on freeway entrances near downtown or peak direction at peak period on the Alemany interchange, and is factored in as part of the traffic approaching the Bay Bridge before cumulative downtown development is added.

TABLE B-1: PROJECTS COMPLETED BEFORE 1984

Assessor's Block Case No.		Project Name	Office		Retail		Date Occu- pied
			(Gross Sq. Ft.)		(Gross Sq. Ft.)		
			Total New Constr.	Net New Constr.	Total New Constr.	Net New Constr.	
Completed But Not In Base Case Analysis							
106	81.415ED	1299 Sansome	41,000	41,000	3,500	3,500	1983
141	81.151EV	100 Broadway	13,000	13,000			1983
163	EE81.1	901 Montgomery	63,000	63,000	18,800	18,800	1983
164	81.631D	847 Sansome	23,750	23,750			1983
164	81.251D	936 Montgomery	21,500	11,500			1983
196		736 Montgomery	40,000	40,000			1983
196	CU79.49	Pacific Lumber Co.	92,000	92,000			1983
206	81.165D	401 Washington/Battery	13,200	13,200	1,800	1,800	1983
228	81.610ED	569 Sacramento (C)	19,000	19,000			1983
237	DR80.6	353 Sacramento (Daon)	277,000	251,000	8,300	-2,000	1983
240	DR80.16	550 Kearny (Addition)	71,400	71,400			1983
263	CU79.12	101 California	1,265,000	1,257,000	24,700	-14,300	1983
287	81.550D	Sloane Building (C)	125,300	125,300	30,000	30,000	1983
292	DR79.13	Crocker National Bank	676,000	495,000	86,000	54,000	1983
312	EE79.370	50 Grant	90,000	90,000			1983
313	EE77.257	Nieman Marcus			143,000	128,000	1982
351	DR79.133	10 U.N. Plaza	92,050	92,050			1983
738	SFRA	One Flynn Center	25,000	25,000			1983
762	SFRA	Opera Plaza (M)	50,000	50,000			1983
3518	81.483V	291 10th St.	25,700	25,700		-25,700	1983
3702	EE81.25	1155 Market/8th	138,700	138,700	8,800	8,800	1983
3708	DR80.34	25 Jessie/Ecker Square	111,000	111,000			1983
3709	DR80.36	Five Fremont Center	791,200	722,200	35,000	17,300	1983
3712	DR79.11	Federal Reserve	640,000	640,000			1983
3717	EE78.413	150 Spear	330,000	330,000			1983
3718	DR79.12	Pacific Gateway	540,000	540,000	7,500	7,500	1983
3724	SFRA	Yerba Buena West	335,000	335,000			1983
3732	81.548DE	466 Clementina (C)	15,150	15,150			1983
3735	SFRA	Convention Plaza	339,000	339,000			1983
3735	SFRA	Planter's Hotel (C)	20,000	20,000			1983
3752	EE77-220	Office Bldg. (YBC SB-1)	11,000	11,000			1983
3763	81.287V	490 2nd at Bryant (C)	40,000	40,000			1983
3763	81.381	480 2nd at Stillman (C)	35,000	35,000			1983
3763	32.38EVD	400 2nd & Harrison	71,500	49,500			1983
3776	81.693EV	539 Bryant/Zoe	63,000	63,000			1983
TOTAL			6,504,450	6,188,450	367,400	227,700	

* (C) - Conversion (generally industrial and/or warehouse to office)
 (M) - Mixed Use (office/residential/commercial)

The Department's Master Project Log contains listings for projects which are no longer active for various reasons, such as no action by project sponsor in over one year, application withdrawn by sponsor, or project proposal revised to non-office or non-retail uses. Some of these files have not been formally closed due to other higher staff priorities; however, the projects are not included on the cumulative list when staff assigned have concluded that the office project has been abandoned or withdrawn, or the scope or nature of the proposal is so uncertain as to be not reasonably foreseeable. Examples include 98 Battery Street (83.420ED), withdrawn by sponsor, 1361 Bush Street (81.667ED), now a medical facility, Welsh Commons (EE81.59) now a residential-retail project.

In EIRs prepared during the latter half of 1983, the list used for cumulative analyses included a section labeled "Completed But Not In Base Case." As of the end of 1983, that list totaled over 6 million s.f. of office space and about 225,000 s.f. of retail space. These projects were included on pre-1984 lists even though they were built and fully or partially occupied because some of the baseline data (measurements of the existing situation) for some transportation systems were collected before these projects were completed. The baseline data have recently been updated to include projects completed and occupied up to 1984 for use in the Downtown Plan EIR. Using 1984 as the existing baseline situation means that buildings completed by the end of 1983 should be omitted from the list of projects used for cumulative analysis in order to avoid counting effects of these projects twice.

The Department is aware of proposals by Santa Fe Pacific Realty Corporation (formerly Southern Pacific Land Co.) to develop property near China Basin. This area and the proposals by Santa Fe Pacific have been called "Mission Bay." An application for environmental review was filed for the project but was withdrawn in early 1984 and no new application has been filed. After withdrawal of this application, members of the San Francisco Board of Supervisors proposed that the City purchase all or portions of the property; this proposal was later dropped. In July, 1984, the project sponsor announced major revisions in its proposal reducing the scope of the development proposal. No new applications have been filed. Both the original project and the July 1984 proposal would require environmental analyses and Zoning Map and Comprehensive Plan amendments, and BCDC and possibly U.S. Army Corps of Engineers permits in addition to City approvals before any building could begin. The Board of Supervisors and the City Planning Commission have recently accepted a gift from Santa Fe Pacific for further study of potential development of the Mission Bay site (resolutions 345-85 and 10254, respectively). Neither resolution contained any endorsement by the Board or the Commission of any specific proposals for the site. With no application pending, and with the possibility of further revisions by the developer before submittal of any application, the Mission Bay project remains too speculative to include in any cumulative analyses.

The Department of City Planning is in the process of preparing plans and environmental analyses for several areas in or near the downtown. Because these plans involve only proposals for zoning and other land use controls, they are not properly part of any cumulative list. Although analyses for these plans sometimes predict amounts of office space that could be built in the area being studied, the predictions are for purposes of assessing impacts of the plans and in no way reflect proposed future development.

Use of the Department's list for estimating cumulative impacts builds in certain limitations. It assumes, for example, that all proposals will be built at essentially the size proposed and that all buildings once built will be fully occupied. It is important to note that the cumulative list cannot be adjusted to reflect temporary limitations on growth impacts caused by City actions or policies, such as the Special Use District in the South of Market, the Downtown Plan Interim Controls or the proposed moratorium on new office projects containing over 50,000 sq. ft. Nor has any adjustment been made to account for reduced building potential as proposed in the Downtown Plan (base FAR of 14:1 reduced to 10:1). Thus, the total square footages on the list of projects under formal review may be overestimated, and impacts based on the square footages may also be overestimated, if some buildings are not built, not fully occupied, or reduced in size.

TABLE B-2: PROJECTS TO BE USED FOR LIST-BASED CUMULATIVE IMPACT ANALYSIS
IN DOWNTOWN OFFICE PROJECT EIRS
-March 22, 1985-

Block	Case No.	Project Name	Office (Gross Sq. Ft.)		Retail (Gross Sq. Ft.)	
			Total	Net	Total	Net
			New	New	New	New
60	84.230E	Lombard Plaza	75,000	75,000		
110	82.129E	1000 Front	139,000	139,000	3,000	3,000
112	83.447EA	1100 Sansome/150 Green	60,210	53,210	6,050	6,050
142	84.517E	998 Sansome	26,670	24,720		
192	83.412ED	1055 Stockton			81,500	66,500
195	84.533E	Columbus, Jackson, Kearny	187,150	175,000	19,500	16,380
229	83.222EC	Embarcadero West	611,000	589,000	60,000	60,000
239	85.79E	343 Sansome	373,000	279,800	9,000	9,000
267	84.432E	235 Pine	143,000	143,000	6,000	6,000
312	85.21EC	720 Market	43,000	43,000	6,000	6,000
-347	STATE	State Office Building	226,880	226,880		
691	84.451E	1200 Van Ness	40,240	38,300	65,600	61,400
740	85.22E	619 Larkin	2,910	2,910	1,960	1,960
814	81.540E	101 Hayes	132,000	132,000	6,000	6,000
816	84.530E	210 Fell	64,530	49,530	12,120	2,490
837	81.5V	Page Plaza (C)	26,160	26,160		
3512	84.448E	Van Ness Gateway Center	459,670	459,670	39,960	39,960
3520	84.582F	1489 Folsom (C)	9,000	9,000	3,000	3,000
3526	83.475V	530-550 9th	42,300	42,300		
-3702	83.196E	1169 Mkt, Trinity	820,000	805,000	40,000	40,000
-3703	84.539E	1035-45 Market (C)	70,000	60,000	30,000	-60,000
3705	85.73E	55-5th Street (C)	52,430	47,590	41,950	31,150
3708	84.455E	2nd/Stevenson	292,000	292,000	8,000	8,000
3721	84.403	535 Mission	427,000	360,000	4,000	-4,780
3721	83.331E	100 First @ Mission	348,920	342,000		
3721	84.199E	524 Howard	270,000	270,000	4,430	4,430
3735	83.313E	35 Hawthorne	47,400	47,400	2,900	2,900
3736	84.358E	201 2nd @ Howard	29,300	29,300	4,900	4,900
3736	83.311E	299 2nd @ Folsom	267,760	232,760	15,580	13,630
3744	84.41E	Hills Bros (C)(M)	635,000	535,000	40,000	40,000
3747	85.58E	300 Beale (C)(M)	130,670	130,670	4,700	4,700
3749	83.464EV	50 Guy Place	17,500	17,500		
3761	84.299E	220 Harrison			10,000	10,000
3769	83.213EV	59 Harrison (C)	113,500	49,750		
3786	84.504E	340 Townsend	48,000	48,000	1,300	1,300
3788	82.352EV	640 2nd	39,100	37,400		
9900	SFRA	Rincon Point/S.Beach	65,000	65,000	20,000	20,000
many	SFRA	YBC (misc. bldgs)	621,000	621,000		
			=====	=====	=====	=====
TOTAL UNDER FORMAL REVIEW			6,956,300	6,498,850	547,450	403,970

TABLE B-2(Continued)

Projects Approved, Not Yet Under Construction-March 22, 1985-

Block	Case No.	Project Name	Office (Gross Sq. Ft.)		Retail (Gross Sq. Ft.)	
			Total New	Net New	Total New	Net New
59	83.177E	1620 Montgomery	82,270	45,390		
113	82.418EVAD	1171 Sansome	22,000	22,000		
130	83.612C	1558 Powell	2,500	2,500		
136	83.476V	962 Battery	15,000	15,000		
176	82.368E	900 Kearny	25,000	25,000	5,000	5,000
194	83.128E	732 Washington	17,500	17,500	11,240	11,240
225	81.403ED	814 Stockton	3,500	3,500	3,300	3,300
227	82.463E	505 Montgomery	314,000	287,400	12,100	-4,780
236	82.511E	222 Front	20,800	13,940	3,250	-0-
271	83.13E	582 Bush	18,100	18,100	800	800
288	83.148E	665 Bush (M)	12,400	2,600		-2,700
294	82.87D	44 Campton Place	7,600	7,600		
309	83.333E	212 Stockton	32,220	15,890	21,700	16,200
326	83.86E	156 Ellis	3,200	3,200		
327	82.445E	Stockton/O'Farrell	43,300	25,750	57,950	28,000
336	83.21ECV	440 Turk	25,000	8,150		
671	82.24V	1581 Bush (C)	16,000	16,000		
-3702	81.549ED	1145 Market	137,500	108,500	8,000	8,000
3705	83.314E	5th and Market	535,000	535,000	120,000	40,000
3705	80.315	Apparel Mart III	332,400	332,400		
3706	84.599D	799 Market @ 4th (C)	98,400	48,800	53,230	-48,800
3708	83.75E	49 Stevenson	169,600	136,900	9,800	-2,900
3735	SFRA	Yerba Buena Center	480,000	480,000		
3750	82.241E	600 Harrison	228,000	228,000	10,000	10,000
3750	82.77V	642 Harrison (C)	54,400	45,900		
3789	81.552EV	625 2nd/Townsend (C)	157,000	157,000		
3794	82.416EV	155 Townsend	19,000	19,000		
3803	81.244D	China Basin Expansion	196,000	196,000		
9900	81.63E	Ferry Building Rehab	309,500	97,500	163,500	124,000
many	SFRA	Yerba Buena Gardens	1,250,000	1,250,000	201,000	201,000
many	SFRA	Rincon Point/S.Beach	635,000	635,000	185,000	185,000
			=====	=====	=====	=====
TOTAL APPROVED			5,262,190	4,799,520	865,870	573,360

TABLE B-2(Continued)

Projects Under Construction
March 22, 1985

Block	Case No.	Project Name	Office (Gross Sq. Ft.)		Retail (Gross Sq. Ft.)	
			Total New	Net New	Total New	Net New
58	82.234E	Roundhouse (C)	45,000	45,000	3,000	3,000
65	82.168V	990 Columbus	12,000	12,000		
112	81.258	Ice House (C)	209,000	209,000		
136	81.243E	955 Front/55 Green	50,000	50,000		
143	81.353ED	1000 Montgomery (C)	39,000	39,000		
146	83.99EC	644 Broadway	42,800	42,800		
161	DR80.191	Mirawa Center	36,000	36,000	30,650	30,650
164	81.583D	50 Osgood Place	22,500	22,500	9,100	9,100
166	DR80.15	750 Battery	105,400	105,400	12,800	12,800
166	CU81.7	222 Pacific at Front (C)	142,000	142,000		
167	SFRA	Golden Gateway III	103,000	103,000		
176	81.673EACV	Columbus/Pacific(Savoy)	49,000	49,000	22,000	22,000
176	83.229E	801 Montgomery	31,800	31,800	6,200	6,200
208	81.104EDC	Washington/Montgomery (M)	235,000	233,300	4,000	-1,200
227	EE80.296	Bank of Canton	230,500	177,500		-800
239	DR80.1	456 Montgomery	160,550	160,550	24,250	24,250
240	81.705ED	580 California/Kearny	329,500	260,000	6,500	6,500
261	81.249ECQ	345 California (M)	640,000	466,500	15,500	15,500
262	81.206D	130 Battery	41,000	41,000		
265	81.195ED	388 Market at Pine (M)	234,500	85,500	10,000	-8,500
268	81.422D	250 Montgomery at Pine	105,700	65,700	8,000	8,000
270	81.175ED	466 Bush	86,700	86,700	7,800	2,200
271	81.517	453 Grant	27,500	27,500	6,200	6,200
288	81.461EC	333 Bush (Campeau)(M)	498,400	458,100	20,900	20,900
288	81.687ED	222 Kearny/Sutter	150,000	49,950	10,000	-8,400
288	DR 80.24	101 Montgomery	264,000	234,000	4,900	-14,100
289	81.308D	One Sansome	603,000	603,000	7,000	7,000
311	82.120D	S.F. Federal	246,800	218,850	1,600	-9,440
351	DR79.24	Mardikian/1170 Market	40,000	40,000		
641	82.200CV	1735 Franklin (C)	8,600	8,600		
642	83.218V	1699 Van Ness	20,000	20,000		
642	82.224VEC	1750 California	82,530	82,530		
672	SFRA	Wealth Investments	104,500	104,500		
690	SFRA	Post/Van Ness	60,000	60,000	20,000	20,000
716	81.581ED	Polk/O'Farrell (M)	61,600	61,600	22,400	22,400
743	SFRA	Van Ness/Turk (Vanguard)	85,000	85,000		
767	STATE	State Office Building	293,300	293,300		
818	83.94EV	583-591 Hayes (C)	4,900	4,900		
834	82.603E	25 Van Ness (C)	101,800	42,800	36,400	36,400
3504	82.137V	44 Gough	30,000	30,000		
3512	82.14	Van Ness Plaza	170,000	170,000	6,000	6,000
3704	83.404	901 Market (C)	145,500	126,000	80,000	80,000
3707	81.492ED	90 New Montgomery	124,300	124,300	3,350	3,350
3707	81.245DA	New Montgomery Pl.	227,500	209,700	2,200	-3,900
3708	81.493ED	71 Stevenson	324,600	324,600	6,200	6,200
3709	81.113ED	Central Plaza	353,100	136,300	17,400	17,400

TABLE B-2(Continued) Projects Under Construction (Continued)

3715	82.16EC	121 Steuart	33,200	33,200		
3715		141 Steuart	80,000	80,000		
3715	SFRA	Rincon Pt. Site A	79,000	79,000	11,000	11,000
3717	81.183E	123 Mission	342,800	342,800		
3717	82.82D	135 Main	260,000	260,000	4,000	4,000
3717	EE79.236	101 Mission	219,350	219,350		
3717	EE80.349	Spear/Main (160 Spear)	279,000	279,000	7,600	7,600
3722	81.417ED	144 Second at Minna	30,000	30,000		
3724	81.102E	Holland Ct. (C)	27,850	27,850		
3729	82.86D	774 Tehama	5,800	5,800		
3733	82.29E	832 Folsom	50,000	50,000		
3738	DR80.5	315 Howard	294,000	294,000	3,200	3,200
3741	82.203C	201 Spear	229,000	229,000	5,200	5,200
3749	EE81.18	Marathon - 2nd/Folsom	686,700	686,700	35,300	35,300
3764	82.591E	Second St. Sq. (C)	333,000	263,000	25,000	25,000
3775	81.147V	338-340 Brannan (C)	36,000	36,000		
3787	81.306	252 Townsend at Lusk	61,000	61,000		
3794	83.545V	139 Townsend	51,200	50,000		
3794	81.569EV	123 Townsend	104,000	49,500		
3923	81.491EVF	1550 Bryant	80,600	49,600		
=====						
TOTAL UNDER CONSTRUCTION			10,260,380	9,105,580	495,650	411,010
GRAND TOTAL ALL PROJECTS			22,478,870	20,403,950	1,908,970	1,388,340

(C) - Conversion (generally industrial and/or warehouse to office)

(M) - Mixed Use (office/residential/commercial)

This list was developed solely for the process of assessing the environmental impacts of proposed new office projects in downtown San Francisco. The list includes all projects for which an application has been received and which are not part of the baseline. The baseline is current to 1984. Because no later baseline has been established, this list may identify as "under construction" projects which have been completed and substantially occupied since March 1984.

4359B

TABLE B-3

MAJOR OFFICE BUILDING CONSTRUCTION IN SAN FRANCISCO THROUGH 1983.
(GROSS SQUARE FEET)

<u>Year</u>	<u>Total Gr. Square Ft. Completed</u>	<u>5-Year Total</u>	<u>5-Year Annual Average</u>	<u>Cumulative Total All Office Bldgs Completed</u>	<u>Cumulative Total Downtown Office Buildings</u>
<u>Pre-1960</u>		(Net)a	(Net)a	28,145,000(b)	24,175,000(c)
1960	1,183,000				
1961	270,000				
1962	--				
1963	--				
1964	1,413,000				
		<u>2,866,00</u>	<u>573,200</u>		
<u>1960-1964</u>		<u>(2,580,000)</u>	<u>(516,000)</u>	<u>30,725,000</u>	<u>26,754,000</u>
1965	1,463,000				
1966	973,000				
1967	1,453,000				
1968	1,234,000				
1969	3,256,000				
		<u>8,379,000</u>	<u>1,675,800</u>		
<u>1965-1969</u>		<u>(7,541,000)</u>	<u>(1,508,000)</u>	<u>38,266,000</u>	<u>34,295,000</u>
1970	1,853,000				
1971	---				
1972	1,961,000				
1973	2,736,000				
1974	2,065,000				
		<u>8,615,000</u>	<u>1,723,000</u>		
<u>1970-1974</u>		<u>(7,753,000)</u>	<u>(1,550,000)</u>	<u>46,019,000</u>	<u>42,048,000</u>
1975	536,000				
1976	2,429,000				
1977	2,660,000				
1978	---				
1979	2,532,000				
		<u>8,157,000</u>	<u>1,631,400</u>		
<u>1975-1979</u>		<u>(7,341,000)</u>	<u>(1,468,000)</u>	<u>53,360,000</u>	<u>49,389,000</u>
1980	1,284,000				
1981	3,029,000				
1982	3,771,000				
1983	4,108,000				
		<u>12,192,000(d)</u>	<u>3,048,000(d)</u>		
<u>1980-1983</u>		<u>(10,972,800)</u>	<u>(2,743,200)</u>	<u>65,552,000</u>	<u>60,144,000</u>

TABLE B-3
(continued)

/a/ Net equals 90 % of gross. Net new space is added at an increase factor of 90 %, since it is assumed that space equal to 10 % of a new building is demolished to make land available for the new replacement building.

/b/ Source: San Francisco Downtown Zoning Study, Working Paper No. 1, January 1966, Appendix Table 1, Part 1. For pre-1965, data include the area bounded by Vallejo, Franklin, Central Skyway, Bryant and Embarcadero. Also includes one-third of retail-office mixed use. For post-1964, data include the entire city.

/c/ Gross Floor Space for downtown offices are included for the following functional areas: Financial, Retail, Hotel, Jackson Square, Golden Gateway, Civic Center, South of Market, and Outer Market Street as defined in the cited January 1966 report. For post-1964, the entire area east of Franklin St. is included.

/d/ Four-year total and average.

SOURCE: Department of City Planning, July 18, 1984.

APPENDIX C: TRANSPORTATION

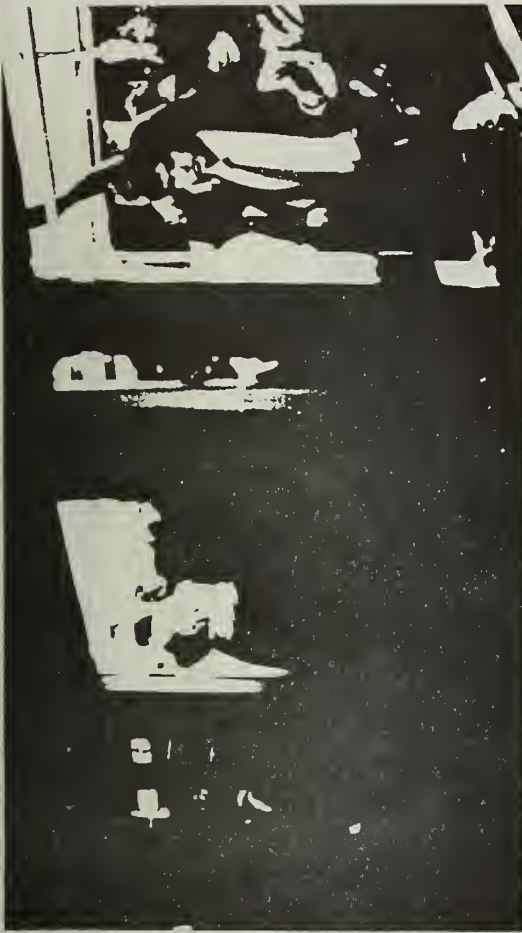
TABLE C-1: PASSENGER LEVELS OF SERVICE ON BUS TRANSIT

<u>Level of Service</u>	<u>Description</u>	<u>Passengers per Seat</u>
A	Level of Service A describes a condition of excellent passenger comfort. Passenger loadings are low with less than half the seats filled. There is little or no restriction on passenger maneuverability. Passenger loading times do not affect scheduled operation.	0.00-0.50
B	Level of Service B is in the range of passenger comfort with moderate passenger loadings. Passengers still have reasonable freedom of movement on the transit vehicle. Passenger loading times do not affect scheduled operations.	0.51-0.75
C	Level of Service C is still in the zone of passenger comfort, but loadings approach seated capacity and passenger maneuverability on the transit vehicle is beginning to be restricted. Relatively satisfactory operating schedules are still obtained as passenger loading times are not excessive.	0.76-1.00
D	Level of Service D approaches uncomfortable passenger conditions with tolerable numbers of standees. Passengers have restricted freedom to move about on the transit vehicle. Conditions can be tolerated for short periods of time. Passenger loadings begin to affect schedule adherence as the restricted freedom of movement for passengers requires longer loading times.	1.01-1.25
E	Level of Service E passenger loadings approach manufacturers' recommended maximums and passenger comfort is at low levels. Freedom to move about is substantially diminished. Passenger loading times increase as mobility of passengers on the transit vehicle decreases. Scheduled operation is difficult to maintain at this level. Bunching of buses tends to occur which can rapidly cause operations to deteriorate.	1.26-1.50
F	Level of Service F describes crush loadings. Passenger comfort and maneuverability is extremely poor. Crush loadings lead to deterioration of scheduled operations through substantially increased loading times.	1.51-1.60

SOURCE: Environmental Science Associates, Inc. from information in the Interim Materials on Highway Capacity, Transportation Research Circular 212, pp. 73-113, Transportation Research Board, 1980.



M OCEAN VIEW - CIVIC CENTER STATION
Wednesday, September 9, 1981 - 8:20 A.M. - Inbound



L TARAVAL - VAN NESS STATION
Wednesday, September 16, 1981 - 4:50 P.M. - Outbound



14 MISSION - MISSION STREET AND SOUTH VAN NESS AVE
Tuesday, September 29, 1981 - 5:45 P.M. - Outbound



N JUDAH - DUBOCE AND CHURCH
Wednesday, June 8, 1983 - 8:00 A.M. - Inbound

FIGURE C-1
PHOTOS OF MUNI PEAK LOADING CONDITIONS

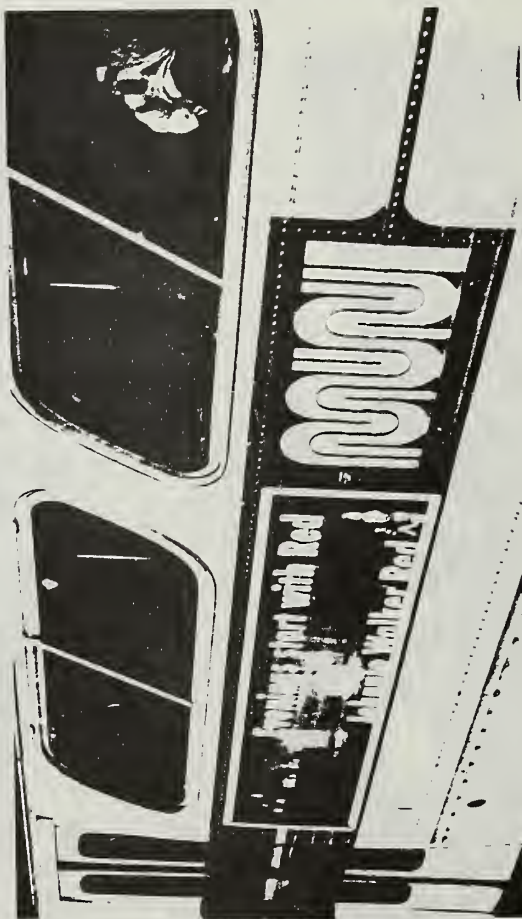
SOURCE: ESA



K INGLESIDE - VAN NESS STATION
Wednesday, September 9, 1981 - 8:00 A.M. - Inbound



N JUDAH - VAN NESS STATION
Wednesday, September 16, 1981 - 5:00 P.M. - Outbound



38 GEARY - VAN NESS AVE. AND O'FARRELL ST.
Wednesday October 21, 1981 - 9:00 A.M. - Inbound



38 GEARY - VAN NESS AVE. AND GEARY BLVD.
Wednesday, October 21, 1981 - 4:20 P.M. - Outbound

FIGURE C-1 (CONTINUED)
PHOTOS OF MUNI PEAK LOADING CONDITIONS

SOURCE: ESA



J CHURCH - CHURCH ST. AND DUBOCE AVE.
Tuesday, September 29, 1981 - 9 00 A.M. - Inbound



30X MARINA EXPRESS - BAYSHORE AVE. AND ARIETA AVE.
Wednesday, October 7, 1981 - 8 00 A.M. - Inbound

FIGURE C-1 (CONTINUED)
PHOTOS OF MUNI PEAK LOADING CONDITIONS

PEDESTRIAN ANALYSIS

The pedestrian analysis has been conducted following methods developed by Pushkarev and Zupan in Urban Space for Pedestrians (MIT Press, 1975).

Table C-2 shows the relationship between pedestrian flow rates and the flow regimes (categories) used to describe levels of operation. Figure C-2 shows photographs of pedestrian conditions that correspond to the flow regimes.

TABLE C-2: PEDESTRIAN FLOW REGIMEN

<u>FLOW REGIME/a/</u>	<u>CHOICE</u>	<u>CONFLICTS</u>	<u>FLOW RATE (p/f/m)/b/</u>
Open	Free Selection	None	less than 0.5
Unimpeded	Some Selection	Minor	0.5 to 2.0
Impeded	Some Selection	High Indirect Interaction	2.1 to 6.0
Constrained	Some Restriction	Multiple	6.1 to 10.0
Crowded	Restricted	High Probability	10.1 to 14.0
<u>Design Limit - Upper Limit of Desirable Flow</u>			
Congested	All Reduced	Frequent	14.1 to 18.0
Jammed	Shuffle Only	Unavoidable	Not applicable/c/

/a/ Photographs of these conditions are shown in Figure C-2.

/b/ P/F/M = Pedestrians per foot of effective sidewalk width per minute.

/c/ For Jammed Flow, the (attempted) flow rate degrades to zero at complete breakdown.

SOURCE: Urban Space for Pedestrians, MIT Press, 1975, Cambridge, MA.



The borderline between IMPEDED and UNIMPEDED FLOW, with about 130 sq ft (12 m²) per person, or a flow rate of about 2 people per min per ft (6.5 per m) of walkway width. Individuals as well as couples visible in this view have a choice of speed and direction of movement. This rate of flow is recommended for design of outdoor walkways in office districts and other less dense parts of downtown areas.



The midpoint of the IMPEDED FLOW range, with about 75 sq ft (6.9 m²) per person, or a flow rate of about 4 people per min per ft (13 per m) of walkway width. Physical conflicts are absent, but pedestrian navigation does require constant indirect interaction with others. This rate of flow is recommended as an upper limit for the design of outdoor walkways in shopping districts and other dense parts of downtown areas.



The uneven nature of UNIMPEDED FLOW. While the people walking in the plaza - which is 17 ft (5.2 m) wide, compared to 23 ft (7 m) in the preceding picture - have almost 130 sq ft (12 m²) per person on the average, the space allocation for the eight individuals in the foreground is closer to 70 sq ft (6.4 m²). Thus, indirect interaction with others is still quite frequent in the upper range of UNIMPEDED FLOW.



Lower range of UNIMPEDED movement, approaching OPEN FLOW. About 350 sq ft (32.2 m²) per person, or a flow rate of less than 1 person per min per ft (3.3 per m) of walkway width. Complete freedom to select the speed and direction of movement; individuals behave quite independently of each other. For a design standard based solely on pedestrian density, this amount of space can be considered excessive.

FIGURE C-2
PHOTOS OF PEDESTRIAN FLOW LEVELS

SOURCE: Pushkarev and Zupan

JAMMED FLOW. Space per pedestrian in this view is about 3.8 sq ft (0.35 m²). This is representative of the lower half of the speed-flow curve, where only shuffling movement is possible and even the extremely un-

comfortable maximum flow rate of 25 people per min per ft (82 per m) of walkway width cannot be attained due to lack of space. Photograph by Louis B. Schlieve.



The threshold of CONGESTED FLOW. The first eleven people in the view have about 16 sq ft (1.5 m²) per person, corresponding to a flow rate of about 15 people per min per ft (49 per m) of walkway width. The beginnings of congestion are evident in bodily conflicts affecting at least three of the walkers, and in blocked opportunities for walking at a normal pace.



The onset of CROWDED FLOW, with an average of about 24 sq ft (2.2 m²) per person, or a flow rate of about 10 people per min per ft (33 per m) of walkway width. Choice of speed is partially restricted, the probability of conflicts is fairly high, passing is difficult. Voluntary groups of two, of which two can be seen in the picture, are maintained, but cause interference. Note also some overflow into the vehicular roadway in the background.



The midpoint of the CONSTRAINED FLOW range, with about 30 sq ft (2.8 m²) per person, or a flow rate of about 8 people per min per ft (26 per m) of walkway width. The choice of speed is occasionally restricted, crossing and passing movements are possible, but with interference and with the likelihood of conflicts. The man in the dark suit seems to be able to cross in front of the two women in the foreground quite freely, but in the background near the curb people are having difficulty with passing maneuvers.

FIGURE C-2 (CONTINUED):
PHOTOS OF PEDESTRIAN FLOW LEVELS

SOURCE: Pushkarev and Zupan

INTERSECTION ANALYSIS

The capacity analysis of each intersection at which a turning movement count was made utilized the "critical lane" method. This method of capacity calculation is a summation of maximum conflicting approach lane volumes that gives the capacity of an intersection in vehicles per hour per lane. (This method is explained in detail in an article entitled "Intersection Capacity Measurement Through Critical Movement Summations: A Planning Tool," by Henry B. McInerney and Stephen G. Peterson, January 1971, Traffic Engineering. This method is also explained in "Interim Materials on Highway Capacity", Transportation Research Circular No. 212, Transportation Research Board, January 1980). The maximum service volume for Level of Service E was assumed as intersection capacity. A service volume is the maximum number of vehicles that can pass an intersection during a specified time period in which operating conditions are maintained corresponding to the selected and specified Level of Service (see Table C-3). For each intersection analyzed, the existing peak-hour volume was computed and a volume-to-capacity (v/c) ratio was calculated by dividing the existing volume by the capacity at Level of Service E.

TABLE C-3: VEHICULAR LEVELS OF SERVICE AT SIGNALIZED INTERSECTIONS

Level of Service	Description	Volume/Capacity (v/c) Ratio/a/
A	Level of Service A describes a condition where the approach to an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.	less than 0.60
B	Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can generally be described as very good.	0.61-0.70
C	Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally may have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.	0.71-0.80
D	Level of Service D describes a condition of increasing restriction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower demand such that queues are periodically cleared, thus preventing excessive back-ups. The traffic operation can generally be described as fair.	0.81-0.90
E	Capacity occurs at Level of Service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting up-stream of the intersection and vehicles may be delayed up to several signal cycles. The traffic operation can generally be described as poor.	0.91-1.00
F	Level of Service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of the jammed condition, this volume would be less than capacity.	1.01+

/a/ Capacity is defined as Level of Service E.

SOURCE: San Francisco Department of Public Works, Traffic Division, Bureau of Engineering from Highway Capacity Manual, Highway Research Board, 1965

TABLE C-4: TRAFFIC LEVELS OF SERVICE FOR FREEWAYS

Level of Service	Description	Volume/Capacity (v/c) Ratio/a/
A	Level of Service A describes a condition of free flow, with low volumes and high speeds. Traffic density is low, with speeds controlled by driver desires, speed limits, and physical roadway conditions. There is little or no restriction in maneuverability due to the presence of other vehicles, and drivers can maintain their desired speeds with little or no delay.	0.00-0.60
B	Level of Service B is in the higher speed range of stable flow, with operating speeds beginning to be restricted somewhat by traffic conditions. Drivers still have reasonable freedom to select their speed and lane of operation. Reductions in speed are not unreasonable, with a low probability of traffic flow being restricted.	0.61-0.70
C	Level of Service C is still in the zone of stable flow, but speeds and maneuverability are more closely controlled by the highervolumes. Most of the drivers are restricted in their freedom to select their own speed, change lanes, or pass. A relatively satisfactory operating speed is still obtained.	0.71-0.80
D	Level of Service D approaches unstable flow, with tolerable operating speeds being maintained though considerably affected by changes in operating conditions. Fluctuations in volume and temporary restrictions to flow may cause substantial drops in operating speeds. Drivers have little freedom to maneuver, and comfort and convenience are low, but conditions can be tolerated for short periods of time.	0.81-0.90
E	Level of Service E cannot be described by speed alone, but represents operations at even lower operating speeds (typically about 30 to 35 mph) than in Level D, with volumes at or near the capacity of the highway. Flow is unstable, and there may be stoppages of momentary duration.	0.91-1.00
F	Level of Service F describes forced flow operation at low speeds (less than 30 mph), in which the freeway acts as storage for queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially and stoppages may occur for short or long periods of time because of downstream congestion. In the extreme, both speed and volume can drop to zero.	1.00+

/a/ Capacity is defined as Level of Service E.

SOURCE: Environmental Science Associates, Inc. from information in the Highway Capacity Manual, Special Report 87, Highway Research Board, 1965.

APPENDIX D

AIR QUALITY

SAN FRANCISCO AIR POLLUTANT SUMMARY 1980-1984¹

<u>POLLUTANT</u>	<u>FEDERAL STANDARD²</u>	<u>STATE STANDARD³</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
<u>Carbon Monoxide (CO)</u>							
1-hour average (ppm)	35	20					
Highest hourly average No. of exceedances			10 0	8 0	-- 0	-- 0	-- --
8-hour average (ppm)	9	9					
Highest 8-hour average No. of exceedances			7.5 0	5.3 0	9 1	5.1 0	10.8 1
<u>Ozone (O₃)</u>							
1-hour average (ppm)	.12 ⁴	.10					
Highest hourly average No. of exceedances			0.09 0	0.07 0	.08 0	.13 1	0.10 0
<u>Nitrogen Dioxide (NO₂)</u>							
1-hour average (ppm)	None	.25					
Highest hourly average No. of exceedances			0.17 0	0.11 0	.13 0	.13 0	0.14 0
<u>Sulphur Dioxide (SO₂)</u>							
24-hour average (ppm)	.14	.05					
Highest 24-hour average No. of exceedances			0.018 0	0.016 0	.012 0	.018 0	0.03 0
<u>Total Suspended Particulates (TSP)</u>							
24-hour average (ug/m ³)	260	100					
Highest 24-hour average No. of exceedances			173 6	103 1	106 3	117 4	-- --

APPENDIX D
(continued)
AIR QUALITY

SAN FRANCISCO AIR POLLUTANT SUMMARY 1980-1984¹

POLLUTANT	FEDERAL STANDARD ²		STATE STANDARD ³				
	75	60	1980	1981	1982	1983	1984
Annual Geometric Mean (ug/m ³) ⁵							
Annual Geometric Mean			52.1 No	56.0 No	57.0 No	55.0 No	60.0 1
Annual Exceedances							
Lead							
3-month Average (mg/m ³)	1.5	None					
Highest 3-month average			0.53	0.35	---	---	---
No. of exceedances			0	0	---	---	---
1-month Average (mg/m ³)	None	1.5	---	---	---	---	---
No. of exceedances	---	---	---	---	---	---	---

¹1980-84 data collected at 900 23rd Street.

²Federal standard is not to be exceeded more than once per year. Annual average standards are not be exceeded.

³State standards are not to be equalled or exceeded. The State 1-hour average CO standard was reduced from 40 ppm to 20 ppm in 1982.

⁴The federal standard is given in terms of Expected Annual Excesses, which is based on a 3-year running average.

⁵The annual Geometric Mean is a single number that applies to an entire year of data. "No" indicates TSP concentrations did not exceed 60 (ug/m³).

Note: ppm = parts per million
ug/mg³ = micrograms per cubic meter
mg/m³ = milligrams per cubic meter

Source: BAAMQD, Air Pollution in the Bay Area by Station and Contaminant, March issues, 1980-1985; and California Air Resources Board, California Air Quality Data, Annual Summaries, 1979-1982.

APPENDIX E: RESIDENCE PATTERNS AND HOUSING

This appendix describes the methodologies for estimating residence patterns for the project and for cumulative development in downtown San Francisco. There is one method for estimating residence patterns for the project; there are two methods for estimating residence patterns associated with cumulative development. The background on these latter two approaches is presented in Section V.A., Introduction to Cumulative Impact Analysis.

Estimating Residence Patterns for the Project

For the purposes of cumulative impact analysis, the residence patterns for the project are estimated for the year 2000. The assumption is that the project would have characteristics similar to the average characteristics for all similar buildings in the C-3 District in 2000.

The first step is to estimate employment in the project. The year 2000 employment densities developed in the Downtown Plan EIR analysis for management/technical office space (267 gsf per employee) and retail space (350 gsf per employee) are applied to the net additional space in the project in each of these use categories.¹ (In some projects the net additional retail space may be a negative number.)

In the second step, the number of these workers who would live in San Francisco and other areas of the region are estimated using the year 2000 distribution of C-3 District management/technical office workers and retail workers by place of residence. The residential distribution for office workers in the project would be: San Francisco - 44%, East Bay - 35%, Peninsula - 11%, and North Bay - 10%. For retail workers, the distribution would be: San Francisco - 75%, East Bay - 12%, Peninsula - 10%, North Bay - 3%.² The total estimate of workers in the project who would live in each area of the region is the sum of the office and retail estimates in each area.

Estimating Residence Patterns for Cumulative Development

Two residence patterns forecasts are used in the cumulative impact analysis. The first is from the Downtown Plan EIR analysis of C-3 District development and employment

growth to the year 2000. The C-3 District forecasts presented in this Supplemental EIR are the results of the methodology and procedures used in the Downtown Plan EIR analysis to forecast changes over time in the residential distribution of C-3 District workers. No new calculations were undertaken for the purposes of this Supplement. The second residence patterns forecast involved a set of calculations to establish both a 1984 base year estimate and future estimates for projects on the list of cumulative office development. These are described below.

Downtown Plan EIR Approach

The residence patterns for all C-3 District employees in 2000 were forecast for the Downtown Plan EIR. (This approach used information and data from the Downtown Plan EIR forecasts, including 1981 and 1982 employer/employee surveys in the C-3 district and South of Market areas; 1960, 1970 and 1980 Census data, ABAG housing forecasts and other relevant data sources.) These forecasts are summarized in the Supplemental EIR section on Residence Patterns and Housing (see Table 9). The methodologies for forecasting C-3 District employment and residence patterns are described in Appendices H and I of the Downtown Plan EIR.³ Table I.10 on page I.38 of the Downtown Plan EIR shows the residence patterns percentages applied to employment in each land use (or business activity). The resultant distribution for all workers by place of residence is as follows: San Francisco - 50%, East Bay - 29%, Peninsula - 13%, and North Bay - 8%.

List-Based Approach

The methodology for estimating residence patterns for workers associated with the list of cumulative office development in the downtown area is based on applying factors describing current conditions to the increment of office and retail space included in projects on the list. The factors and data describing current conditions for employment densities and the distribution of workers by place of residence are presented in the Department of City Planning document Transportation Guidelines for Environmental Impact Review: Transportation Impacts (hereinafter Transportation Guidelines), published in September, 1983. The data in the Transportation Guidelines are based on analyses of the C-3 District Employer and Employee Surveys conducted for the Downtown Plan EIR, and a similar survey conducted in the South of Market/Folsom area, in 1981 and 1982.

In the first step, an employment density factor is applied to the net addition of office and retail space in projects on the list. For office space the density factor is 276 gsf per employee; for retail space the density factor is 350 gsf per employee.⁴

In the second step, projects in the South of Market/Folsom area (bounded by Folsom, Ninth, Berry, and the Embarcadero) are treated differently from projects elsewhere in the downtown area.⁵ The residence patterns for all workers in the South of Market/Folsom projects are estimated according to the following percentage distribution: San Francisco - 44%, East Bay - 27%, Peninsula - 16%, and North Bay - 13%.⁶ The residence patterns for office workers in other projects on the list (in the C-3 District and elsewhere in the downtown area) are estimated according to the following percentage distribution: San Francisco - 49%, East Bay - 32%, Peninsula - 11%, and North Bay - 8%.⁷ For retail workers in these non-South of Market/Folsom projects, the residence patterns distribution is as follows: San Francisco - 77%, East Bay - 11%, Peninsula - 10%, and North Bay - 2%.⁸ The sum of all workers in each place of residence is the estimate of the increase in downtown workers living in each area due to development of projects on the cumulative list.

This approach has a third step in order to estimate cumulative totals for the downtown workforce, comparable to the C-3 District 2000 forecasts. For residence patterns, the base year totals are the 1984 estimates as prepared for C-3 District employment for the Downtown Plan EIR analysis, plus estimates for the other downtown areas. These latter estimates are based on order-of-magnitude employment estimates for the South of Market/Folsom area and all other downtown areas outside the C-3 District. For the 1984 base year residence patterns totals, the percentage distributions noted above (from the Transportation Guidelines) are applied to employment estimates for the South of Market/Folsom area and other downtown areas, as appropriate. The sum of the 1984 base year totals of workers living in each area of the region and the estimates for each area developed from the list of projects represents the downtown workers residing in each area in the future, accounting only for buildout and absorption of the projects on the list. Other changes both in land use and in the intensity of activity in space in the downtown area could occur over this time period. If these changes were included in the analysis, the employment estimates and the estimates of workers residing in each area of the region would be larger than shown in the text.

¹ Downtown Plan EIR, page IV.C.45 and note 30 on page IV.C.61; also see Table IV.C.2 on page IV.C.6.

² Ibid., page I.38.

³ For a description of the employment forecast methodology, see the Downtown Plan EIR, Appendix H, pages H.6-H.16. For a description of the residence patterns forecast methodology, see the Downtown Plan EIR, Appendix I, pages I.8-I.30.

⁴ San Francisco Department of City Planning, Transportation Guidelines for Environmental Impact Review: Transportation Impacts, September, 1983, pages 14 and 17.

⁵ See Transportation Guidelines, pages 28 and 30 for maps of the Cumulative Development Study Area and the South of Market/Folsom area.

⁶ Ibid., page 21.

⁷ Ibid., pages 11-12.

⁸ Ibid., page 17.

KNOX & CINCOTTA
ATTORNEYS AT LAW

ROBERT F. KNOX
DAVID P. CINCOTTA

December 28, 1984

LAURA R. SWARTZ
LAURENE WU McCLAIN

Mr. William Witte
Executive Director
Mayor's Office of Housing
and Economic Development
100 Larkin Street
San Francisco, CA 94102

Re: Request for Final Approval for Housing
Credits Under the S.F. Office/Housing
Production Program (OHPP)

Dear Bill:

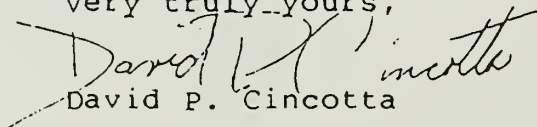
This letter is to request Final Approval for Housing Credits in satisfaction of the conditions of the resolution approving 1145 Market Street on the following properties. These properties have all started construction and/or been completed (see attached building permits) and have been constructed by Trinity Properties.

1. 575, 577 & 579 27th Street; 9 new dwelling units; each 2 bedrooms, counting as 18 housing credits (Building Permit Nos. 502931, 502929 and 502930, respectively, all issued July 1, 1983).
2. 1059 Union; 16 new dwellings, 13 2-bedrooms and 3 studios, counting as 29 housing credits. (Building Permit No. 518804, issued July 31, 1984).
3. 666-678 Grandview; 7 new dwellings each having 2 bedrooms, counting as 14 housing credits. (Building Permit Nos. 519575 and 519574 issued August 14, 1984).

This totals 51 housing credits to be applied against the housing requirements Trinity Properties has regarding Motion No. 9837M. We understand a balance of 44 remains.

If any further information is required, please do not hesitate to call me.

Very truly yours,


David P. Cincotta

DPC:jrc



City and County of San Francisco
Department of City Planning

450 McAllister Street
San Francisco, CA 94102
(415) 556 - 4656

DEAN L. MACRIS
DIRECTOR OF PLANNING

January 2, 1984

Mr. David P. Cincotta
Knox & Cincotta
1170 Market Street, Suite 300
San Francisco, California 94102

Dear Mr. Cincotta:

Per your letter and evidentiary materials to William Witte of December 28, 1984, I hereby grant final approval of 61 housing credits to Trinity Properties, to be applied to its OHPP requirement for 1145 Market Street (Motion No. 9837M). (Please note that the actual number of credits totals 61, not 51 as indicated in your letter.)

Thank you for your participation in the program.

Sincerely,

DEAN MACRIS
Director

DM:lc

cc: Bill Witte
Lu Blazej, City Planning

TRINITY1/H.15



*Trinity 1
Proceeding*

RECEIVED

JAN 24 1985

ACS:

January 22, 1985

Mr. David P. Cincotta
Knox & Cincotta
1170 Market Street, Suite 300
San Francisco, California 94102

Dear Mr. Cincotta:

Per your letter and evidentiary materials to William Witte of December 28, 1984, I hereby grant final approval of 61 housing credits to Trinity Properties, to be applied to its OHPP requirement for 1145 Market Street (Motion No. 9837M). (Please note that the actual number of credits totals 61, not 51 as indicated in your letter.)

Thank you for your participation in the program.

Sincerely,

Dean Macris

DEAN MACRIS
Director

DM:lc

cc: Bill Witte
Lu Blazej, City Planning

TRINITY1.HSG/H.1

APPENDIX F

File No. 81.549ED

Motion No. 9837M

1145 Market Street

MOTION

ADOPTING FINDINGS RELATED TO THE APPROVAL OF BUILDING PERMIT APPLICATION NUMBER 8200517 BY THE CITY PLANNING COMMISSION FOR A PROPOSED OFFICE/COMMERCIAL STRUCTURE LOCATED AT 1145 MARKET STREET.

Preamble

A. Building Permit Application Number 8200517 for a proposed office/commercial project at 1145 Market Street was filed on January 22, 1982, by Trinity Properties, Inc. ("Project Sponsor").

B. The application for environmental evaluation for such project was filed with the Office of Environmental Review on or about May 5, 1981.

C. On June 23, 1983, the City Planning Commission (hereinafter "Commission") held a duly noticed public hearing on the Draft Environmental Impact Report for such project, File No. 81.549E ("Draft EIR").

D. On or about October 20, 1983, the Commission held a duly noticed public hearing on the Certification of the Final Environmental Impact Report for such project, File No. 81.549E ("FEIR").

E. On or about October 20, 1983, after Certification of the FEIR, the Commission conducted a duly noticed public hearing on the merits of Building Permit Application Number 8200517 pursuant to the Commission's discretionary review powers.

F. The project is an office building thirteen (13) stories and approximately 190 feet (190') in height, containing a total of approximately 145,200 gross square feet of floor area, including approximately 137,200 gross square feet of office space, 8,000 gross square feet of ground floor retail space area one subsurface level for mechanical equipment, all as more fully described pages 6 through 16 of the Draft EIR.

G. The Project is within the C-3-G (Downtown General Commercial) and 240-G Height and Bulk Districts, on property located at 1145 Market Street, between Seventh and Eighth Streets, Lots 44 and 44A in Assessor's Block 3702, and would have an FAR of 10 to 1.

H. The Commission on June 29, 1967 and January 17, 1980, approved Resolutions No. 6111 and 8474, respectively, establishing a policy whereby any building permit application on Market Street or in the Downtown Interim Special Review Area would be reviewed by the Commission under its discretionary powers, and the topics of review would include protection and enhancement of the pedestrian environment, preservation of architecturally and historically significant buildings, preservation of housing, avoidance of industrial displacements, adequate and appropriate means of transportation, energy conservation, relationship to environs, and effect on views from public areas and on the skyline.

CITY PLANNING COMMISSION

File No. 81.549ED
Motion No. 9837M
1145 Market Street
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I. In reviewing this application in accordance with the provisions of the California Environmental Quality Act ("CEQA"), the State CEQA Guidelines ("State Guidelines") and Chapter 31 of the San Francisco Administrative Code ("Chapter 31"), the Commission has reviewed and considered the information contained in the FEIR, having found the FEIR to be adequate, accurate and objective, having certified the completion of the FEIR in compliance with the California Environmental Quality Act and the State EIR Guidelines on October 20, 1983, and finding that there are no significant revisions to the Draft EIR.

J. In reviewing this application, the Commission has had available to it for its review and consideration studies, letters, plans and reports pertaining to the Project contained in the Department of City Planning's case files, has reviewed and considered the information contained in the Downtown EIR Consultant's Report prepared by Environmental Science Associates, Inc., dated May, 1983, and has heard testimony from interested parties during the public hearing on the merits of the Project.

Findings

Having reviewed all the materials identified in the recitals above, and having heard oral testimony and arguments, this Commission finds, concludes, and determines as follows:

1. The above recitals are accurate and also constitute findings of the Commission.

2. The Project is in conformity with all applicable standards of the San Francisco City Planning Code ("Code") and is allowed as a principal permitted use under current zoning regulations.

3. The Building Permit Application has been reviewed by the City Planning Commission under its discretionary review powers pursuant to Commission policy under Resolutions No. 6111 and 8474.

4. The nation, region and the City and County of San Francisco ("City") are currently experiencing a high level of unemployment, which does not reflect those who are discouraged and no longer seeking employment. The construction of new office space in the City's downtown area is an employment generator.

5. Recent cutbacks in Federal HUD programs have severely affected state and local governments' ability to provide housing affordable to low and moderate income households.

6. Proposition 13, which restricts the ability of local governments to raise revenue, and federal and state funding cutbacks have resulted in a further reduced ability to provide for and continue city programs for transportation, parking, open space and employment.

CITY PLANNING COMMISSION

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7. To make land available for the development of the Project will require the demolition of one vacant four-story building which currently occupies the site. The existing building on the project site is not rated in either the Foundation for San Francisco's Architectural Heritage Survey or in the Commission's list of Architecturally and/or Historically Significant Buildings. Neither the structure nor any portion of it is required to be preserved.

8. The Project, as indicated by the FEIR, will have a significant effect on the environment in that the Project will contribute to traffic increases downtown and cumulative increases in passenger loading on BART, MUNI, and other transit systems.

9. The Project itself would not have a significant impact on traffic circulation, transit ridership levels, air quality or on frequency of violations of air quality standards, nor will reasonably foreseeable cumulative development in the downtown area have a significant impact on air quality or result in significantly increased frequency of violations of air quality standards under the Bay Area Air Quality Plan. Moreover, the policies of the Transportation Element of the San Francisco Master Plan, as amended, to discourage use of private automobiles and to promote increased use of transit, and the transportation mitigation measures imposed as a condition of approval for this Project, will improve air quality.

10. It is the City's policy as expressed in the Transportation Element of the San Francisco Master Plan, as amended, that additional long-term parking should be located on the periphery of the downtown rather than within it. In conformance with this policy, no parking spaces are provided in the Project.

11. Mitigation measures set forth in the FEIR and agreed to by the project sponsor, or imposed by the Commission as conditions of approval of the Project, will substantially mitigate environmental and other impacts of the proposed Project, except as herein set forth.

12. The Project Sponsor has agreed to provide resources to mitigate Project-related impacts for transportation and housing, and to develop a project that will expand employment opportunities in San Francisco.

13. Conditions imposed by the Commission and agreed to by the project sponsor as specifically set forth in Exhibit A, attached hereto and incorporated herein by reference thereto as though fully set forth, will mitigate other impacts on the non-physical environment.

14. The housing demand created by this Project in San Francisco is mitigated by compliance with the housing mitigation measures required as conditions of approval as more particularly described in Exhibit A.

15. Pursuant to CEQA Section 21081(b) the Commission finds that it is without jurisdiction to require mitigation of impacts outside of San Francisco because it does not have any right or ability to impose land use controls, to provide for or to require public transit or to exercise regulatory functions in areas outside the City and County of San Francisco. Policies to encourage construction of additional housing can and should be adopted by affected city and county governments in the Bay Area.

16. Pursuant to CEQA Section 21081(c) the following Alternatives or Mitigation Measures to the Project described in the FEIR, which would reduce or avoid significant unmitigated impacts and which are not included as part of the Project, are either within the jurisdiction of another agency or are infeasible for the following reasons:

Project Alternatives

- a. Alternative 1 is the "No Project Alternative." This Alternative is infeasible because (1) it conflicts with the objective stated in Section 210.3 of the City Planning Code that the C-3-G, Downtown General Commercial District serve as a citywide and regional center for a variety of uses, at a density level lower than that of the C-3-0 District; (2) it conflicts with Objective 6 of the Commerce and Industry Element of the San Francisco Master Plan to maintain San Francisco's position as a prime location for financial, administrative, corporate and professional activity; and (3) it would result in the failure to provide opportunities for approximately 560 additional permanent jobs and approximately 180 person-years of construction employment in San Francisco that would be created by the Project.
- b. Alternative 2 is the Reduced Building Height Alternative. This alternative would be ten stories and approximately 140 feet in height. The building would be more rectangular in form than the proposed project. This alternative is infeasible because it would appear bulkier than the proposed project, would contain less visual interest, and would increase shadow impacts because there would be no setback at the upper floors.
- c. Alternative 3 is the On-Site Housing Alternative. This alternative is infeasible because it would require an additional bank of elevators to serve the housing; would require separate plumbing and energy systems for office and housing uses; would require deeper excavation for residential parking spaces; and would increase costs while also reducing leasable space.

CITY PLANNING COMMISSION

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1145 Market Street.
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- d. Alternative 4A is the Guiding Downtown Development--Office Use Alternative. Guiding Downtown Development is a staff study which presents a series of possible modifications to existing planning and zoning controls based on concepts developed by the Department of City Planning staff. The City Planning Commission has never conducted a public hearing for this study to determine the desirability of these various concepts, nor has it completed a full environmental evaluation of the impacts of the proposed controls or adopted the study. The study has, however, been discussed informally at various public hearings before the Commission to determine the desirability of the various concepts. In order to evaluate the merits of these potential controls, the Commission directed that an alternative incorporating the concepts of Guiding Downtown Development be included in each EIR on a project within the area covered by Guiding Downtown Development.

Based on such alternatives, and further staff consideration, Guiding Downtown Development was revised in July 1982 (as revised, Guiding Downtown Development is hereinafter called "GDD"), and will be revised again based on, among other things, information contained in future EIRs, further staff consideration and information contained in the Downtown Plan and the Final Downtown EIR. Where feasible and appropriate, Project sponsors have been encouraged to consider and incorporate concepts contained in GDD into project design.

The provisions of GDD are recommendations only. The Project incorporates several: Building setbacks beginning at a height of 85-feet minimize shadows cast by the project on Market Street and the United Nations Plaza; the project does not require the removal of an architecturally significant building; and retail convenience shopping would be included within the building's ground floor.

Alternative 4A is infeasible in the Project Sponsor's opinion because it does not provide for an optimum use of the site under existing controls and Project Sponsor states that he will not proceed with this alternative.

Alternative 4B is the Guiding Downtown Development--Mixed Use Alternative. This Alternative is infeasible for the reasons stated under Alternative 4A above.

17. The following benefits are generated by the Project:

- a. Improvement of downtown land with a new office structure, consistent with the objectives of the Commerce and Industry Element of the Master Plan;
- b. Creation of approximately 180 person-years of construction employment in a time of high unemployment, particularly in the construction trades, in the nation, region and City;
- c. Accommodation of approximately 560 net additional permanent jobs in a time of high unemployment in the nation, region and City;

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- d. Making more efficient use of scarce downtown land resources to carry out the economic, fiscal and employment objectives in a manner consistent with San Francisco's Master Plan and Codes;
- e. Creation of new housing opportunities through compliance with the housing mitigation requirement of 93 credits imposed as a condition of approval.

18. After balancing the unmitigated cumulative effects on the environment and the benefits of the Project, the benefits of the Project override the unmitigated cumulative effects on the environment.

DECISION

The Commission, after carefully balancing the competing public and private interests, hereby approves Building Permit Application No. 8200517 for a building at 1145 Market Street, subject to the conditions attached hereto as Exhibit A, which is incorporated herein by reference as though fully set forth.

ADOPTED: - CITY PLANNING COMMISSION - October 20, 1983

AYES: Commissioners Bierman, Karasick, Klein, Nakashima, Rosenblatt, Salazar, Wright

NOES: None

ABSENT: None

I hereby certify that the foregoing Motion was ADOPTED by the City Planning Commission.

Lee Woods, Jr.
Secretary

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EXHIBIT A
CONDITIONS OF APPROVAL

A. GENERAL MITIGATION MEASURES

1. "Mitigation Measures To Be Included In The Project," as outlined in the Final Environmental Impact Report for 1145 Market Street, No. 81.549E, (the "FEIR"), shall be conditions of approval and are accepted by the Project Sponsor or its successor in interest. If said measures are less restrictive than the following conditions, the more restrictive and protective control, as determined by the Zoning Administrator, shall govern.

B. CONDITIONS TO BE MET PRIOR TO THE RELEASE OF THE FINAL ADDENDUM TO THE BUILDING PERMIT BY THE DEPARTMENT OF CITY PLANNING.

LAND USE DENSITY

1. This approval is for an office/retail building approximately 175 feet in height, (plus penthouse not to exceed 16 feet, 6 inches) containing 12 occupied floors, and consisting of approximately 137,000 gross square feet of office space, approximately 8,000 gross square feet of retail space, in a C-3-G, 240-G height and bulk district.

Design

1. The final plans shall meet the standards of the City Planning Code and be in general conformity with the design accepted by the City Planning Commission on October 20, 1983, and filed with the Department of City Planning as "EXHIBIT B, 1145 Market Street," said project being similar in scale and scope to that described in the FEIR, 81.549E October 20, 1983.
2. The Project architects shall continue to work with the Department of City Planning to reduce the building height by one story, and to further develop the design details. Final materials, glazing, color, pattern and depth of architectural and decorative detailing shall be reviewed and approved by the Department of City Planning. Sponsor and architect shall return to review detailed design development particularly the building top with Department staff prior to filing building permit addenda.
3. Reflective coated mirrored glass or deeply tinted glass shall not be permitted. Only clear glass shall be used at pedestrian levels. In no case shall glass used have a transparency factor of less than 50 percent.
4. The Project sponsor shall continue to work with staff on design and form modifications necessary to bring the design into general conformance with the design guidelines of the draft "Downtown Plan", particularly as it relates to the 90 foot high street wall requirement and the 25 foot set back requirement at the 90 foot height.

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5. Project Sponsor shall contribute \$15,000 (Fifteen Thousand Dollars) to expand seating capacity and/or public art in the Civic Center area, in consultation with the Department of City Planning and subject to the review and approval of appropriate public agencies.

Transportation

1. The Project Sponsor shall, in consultation with the Municipal Railway, install eyebolts or make provisions for direct attachment of eyebolts for Muni trolley wires on the proposed building wherever necessary or agree to waive the right to refuse the attachment of eyebolts to the proposed building if such attachment is done at City expense. ✓
2. The Project Sponsor shall provide a minimum of five secure spaces for bicycles and/or mopeds within the project.
3. The placement of paving, landscaping or structures in the sidewalk area (subject to City approval) shall be done in such a way as to minimize interference with pedestrian traffic.
4. Subsurface sidewalk vaults are discouraged. Should they be needed, Project Sponsor shall design subsurface sidewalk vaults to allow for possible future widening of adjacent streets and vault design shall be of sufficient strength to carry maximum vehicular live and dynamic loads. Provision in the vault area for the placement of street trees shall also be made, subject to staff approval. In addition, should vaults exist or be installed as part of the Project, Project Sponsor shall accommodate and pay for the installation of all subsurface footings, supports and foundations as may be required for future public improvements such as street lights, street trees, trolley wire poles, signs, benches, transit shelters, etc. within project vault areas. Placement of such improvements is entirely within the discretion of the City.
5. Project Sponsor shall provide one on-site loading space. The loading space shall have ready access to the freight elevators, be clearly designated through appropriate graphics, and be exclusively available for service vehicles, general parking being prohibited.

Energy

1. The Project Sponsor shall consider all appropriate energy conservation measures in building design and operations. Prior to issuance of the building permit, or structural addendum (as directed by the Department of City Planning) the Sponsor shall submit to that Department a report containing its assessment of the cost effectiveness of utilizing the various measures outlined in the following checklist including reasons for rejecting any of the measures. Measures to be considered shall include:

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- (1) Passive solar energy design measures;
- (2) Maximum use of natural illumination (daylighting) through window design, light shelves, skylights, etc.;
- (3) Other lighting reduction strategies, including high efficiency outdoor lights, low energy ballasts, task lighting, time switches on storerooms, occupancy sensors, etc.;
- (4) Heat absorptive glass for all windows, except ground level;
- (5) Alternates to air conditioning, including natural ventilation;
- (6) Economizer cycles (which increases use of outside air) in HVAC systems;
- (7) Computer monitoring systems for HVAC, lighting, etc.;
- (8) Load shedding capacity;
- (9) Heat recovery systems;
- (10) Multiple metering of structure (ex. metering every floor);
- (11) Operable and/or fixed shading on all south and west facing glazing.

Performance

1. The authorization and rights vested by virtue of this action shall be deemed void and cancelled, if within one year of this motion a site permit has not been secured by Project Sponsor or its successor in interest.

This authorization may be extended at the direction of the Zoning Administrator only where the failure to issue a permit by the Bureau of Building Inspection to construct the proposed building is delayed by a City agency or by appeal of the issuance of such a permit. In no case shall the period for securing a site permit extend beyond two years of this motion without express authorization by the City Planning Commission.

2. Failure to comply with any of these conditions shall constitute a violation of the Planning Code, enforceable by the Zoning Administrator.

Recordation

1. Prior to the issuance of any building permit for the construction of the Project, the Zoning Administrator shall approve and order the recordation of a notice in the Official Records of the Recorder of the City and County of San Francisco, which notice shall state that construction of the Project has been authorized by and is subject to the conditions of this motion. From time to time after the recordation of such notice, at the request of the Project Sponsor or the successor thereto, the Zoning Administrator shall affirm in writing the extent to which the conditions of this motion have been satisfied.

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C. CONDITIONS TO BE MET FOLLOWING APPROVAL OF BUILDING PERMITS WITH PERFORMANCE AS SPECIFIED.

Transportation

1. In recognition of the need for expanded transportation services to meet the peak demand generated by cumulative commercial development in the downtown area, the Project Sponsor shall contribute funds for maintaining and augmenting transportation service in an amount proportionate to the demand created by the Project as provided by Board of Supervisor's Ordinance No. 224-81. ✓

Should Ordinance No. 224-81 be declared invalid by the Courts, the Project Sponsor shall participate in any subsequent equivalent lawful mitigation measures to be adopted by the Commission or the City in lieu thereof, which measures will apply to all projects similarly situated.

2. Following building completion, the Project Sponsor shall, on an ongoing basis, retain a transportation broker responsible for coordinating, implementing and monitoring the programs among tenants and employees to encourage flex-time transit use and ridesharing, including but not limited to the following: On-site sale of BART tickets and Muni passes and employer subsidized transit passes, establishment of an employee carpool/vanpool system in cooperation with RIDES for Bay Area Commuters or other such enterprises. ✓
3. Within a year after completion of the Project, the Project Sponsor shall conduct a survey, in accordance with methodology approved by the Department of City Planning, to assess actual trip generation, trip distribution, and modal split pattern of Project occupants, and actual pick-up and drop-off areas for carpoolers and vanpoolers. The results of this survey shall be made available to the Department of City Planning. Alternatively, at the request of the Department of City Planning, the project sponsor shall provide an in lieu contribution not to exceed Six Thousand Eight Hundred Sixty Dollars (\$6,860) for an overall survey of the downtown area to be conducted by the City. ✓
4. Prior to the issuance by the City of a Temporary Certificate of Occupancy for the Project the Project sponsor shall, as required by the Department of City Planning: (i) participate with other project sponsors and/or the San Francisco Parking authority in undertaking studies of the feasibility of constructing parking facilities in approved locations to meet the unmet demand for both long and short term parking for trips generated by the Project which cannot reasonably be made by transit and (ii) participate with other project sponsors and/or the Municipal Railway in studies of the feasibility for the establishment of shuttle systems serving the Project site and parking facilities. In no event, however, shall the Project Sponsor be required to expend more than Three Thousand Four Hundred Thirty Dollars (\$3,430) in connection with such studies.

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When directed by the Department of City Planning, the project sponsor shall report to Department staff of progress being made in meeting this requirement, and shall continue to report on progress on a six month basis until a Temporary Certificate of Occupancy is issued by the City.

Housing

1. In order to help meet the housing demand generated by this Project, the Project Sponsor and/or successive project owners shall meet a housing requirement of 93 credits in a manner and within the time which complies with "The San Francisco Office/Housing Production Program (OHPP) Interim Guidelines for Administering the Housing Requirements Placed on New Office Developments" adopted by motion by the City Planning Commission on January 26, 1982, the provisions of which are incorporated herein by reference.

Prior to the issuance of a Temporary Certificate of Occupancy for the Project, Project Sponsor and/or successive owners shall present plans and/or a program for meeting the housing mitigation. Construction and/or rehabilitation of required housing shall be completed within three years following issuance of a Temporary Certificate of Occupancy for the Project.

Rehabilitation within the context of this condition means the return to the housing market of units that have been vacant for reasons other than making them eligible for satisfying this condition for at least one year as of the date of this motion.

Project Sponsor shall report back to the City Planning Commission periodically at six month intervals on its efforts to construct or to rehabilitate units.

2. At Project Sponsor's option, the housing requirement may be met pursuant to any revisions in the OHPP Guidelines which may be subsequently adopted by the City Planning Commission or enacted by the City, prior to the issuance of a Temporary Certificate of Occupancy for this Project.
3. Should compliance with conditions one and two be unenforceable, Project Sponsor agrees to be bound by any legislation requiring or permitting the imposition of housing mitigation measures that may be adopted by the Board of Supervisors and/or be enacted by the State prior to the issuance by the City of a Temporary Certificate of Occupancy for the Project. In no case shall the number of units required be greater than the number required under OHPP Interim Guidelines.

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Energy

1. One year after occupancy of the structure, actual energy consumption, converted to thousands of British Thermal Units, from Pacific Gas and Electric monthly billings, shall be reported to the Department of City Planning by the Project Sponsor. If consumption exceeds energy use projections contained in the Project FEIR, a P.G. & E. or other certified energy audit shall be performed at Sponsor's cost, and a copy supplied to the Department of City Planning. Those recommended energy conservation measures which have a 3-year or less payback shall be implemented by the Project Sponsor.

Employment

1. The Project Sponsor shall notify the City's Employment and Training System (CETS) at least six months prior to project completion of prospective building tenants and job opportunities within the building, particularly entry level positions. This information will be used by CETS to design and structure job training programs and help direct those seeking employment to job opportunities.

Preservation/Archeology

1. Should evidence of historic or prehistoric artifacts be uncovered at the site during construction, the Project Sponsor shall be required to:
 - (1) Ensure that the contractor notify the Environmental Review Officer and the President of the Landmarks Preservation Advisory Board;
 - (2) Ensure that the contractor suspend construction in the area of the discovery for a maximum of four (4) weeks to permit review of the find and, if appropriate, retrieval of artifacts;
 - (3) Pay for an archaeologist or historian acceptable to the Environmental Review Officer to assist in the review of the find and identify feasible measures, if any, to preserve or recover artifacts; and
 - (4) Implement feasible mitigation measures which are identified, provided that the cost of implementation would not exceed one percent of total construction cost as indicated on the Building Permit application on file with the Department of Public Works.

Noise

1. Project Sponsor shall pre-auger holes for piles unless Project Sponsor can establish, to the satisfaction of the Department of City Planning, that such a procedure is unnecessary or undesirable.

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APPENDIX G
COMPARISON OF CUMULATIVE IMPACTS:
FINAL EIR AND SUPPLEMENTAL EIR

For convenience, this appendix provides, where possible, comparison of the results reached in the Supplemental EIRs with similar results reached in the Final EIR. Explanation is also provided where, due to changes in methodology and/or time frame, it is not possible to compare the results of the SEIR with those included in the FEIR.

Cumulative analysis in the project's Final EIR was based upon approximately 17.3 million square feet of net new office space under formal review, approved or under construction. Transportation impacts were assessed using Guidelines for Environmental Evaluation--Transportation Impacts, prepared by the San Francisco Department of City Planning, July 1980 (revised October 1980). Muni transit impacts were based on estimates of patronage and load factors most likely to occur in 1983.

The list-based cumulative analysis in this Supplemental EIR is based upon approximately 20.4 million square feet of net new downtown office space. This includes projects as of March 22, 1985 that are under formal review by the Department of City Planning, approved or under construction. The process used to develop the cumulative list and the list of projects appears in Appendix B, pages A-2 through A-13. This list contains the most recent cumulative development projections prepared by the Department.

The Downtown Plan EIR cumulative analysis is based upon projections of net new downtown office space and includes analysis of policies affecting the size, cost and location of new development in the context of underlying local and regional economic conditions influencing the demand for space. See pages 36 to 40 of this document for a comparison of the two cumulative analysis methodologies.

TRANSPORTATION

The transportation impact analysis is divided into five subsections: (1) Travel Demand; (2) Transit; (3) Pedestrian Movement; (4) Traffic; and (5) Parking.

1. Travel Demand

The travel demand information provided is an intermediate step in the cumulative transportation analysis and thus is not key to a comparison of the ultimate impacts disclosed to the Commission in the FEIR as compared to the SEIR. Comparable information is not found in the FEIR because the SEIR includes travel demand for the C-3 District, based on survey information obtained for that part of the Downtown in 1982, which was not available when the cumulative analysis was prepared for the FEIR in 1981-82. As there is no way to separate the travel from C-3 district projects on the FEIR cumulative list from the total cumulative travel assumed in the FEIR, no comparison of projected travel demand is included in this analysis.

Base data information is also provided on trip generation and modal splits applied to the project. However, this information is not comparable to the FEIR because the modal split used in the SEIR has been refined and improved to include more categories than were used in the FEIR. In addition, it was not possible to separate travel coming into the building from trips leaving the building in the method that was used to project travel for the FEIR; the SEIR covers outbound trips only, as those are the trips contributing to the cumulative p.m. peak transportation impacts.

2. Transit

This analysis addresses the impact the project will have upon local and regional transit agencies serving downtown San Francisco. The information provided addresses changes in level of service on transit carriers due to cumulative development.

The project's contribution to demand from cumulative development cannot be compared between the FEIR and SEIR. The FEIR provides information about the project demand on each transit carrier as a percent of the demand on each transit carrier generated by additional cumulative downtown development; in other words the project is described as an increment of the total increase in transit demand. In the SEIR, information is provided about the project demand on each transit carrier as a percent of the total demand on each transit carrier generated by total downtown development in the year 2000; in other words the project is described as an increment of the total transit demand generated by all downtown development, including all development existing in 1984 and all that projected

to be constructed between 1984 and 2000. The project's percent of the incremental increase between 1984 and 2000 could not be compared due to assumed changes in the transportation mode splits for workers in the existing developed space in downtown which affect the increment, such that it does not reflect the actual increased ridership due to new development. Thus, information directly comparable to the information provided in the FEIR for the project's contribution to cumulative increases in ridership is not available in the SEIR.

MUNI

No comparison with the FEIR is included here since the FEIR did not provide similar information for Muni corridors.

The FEIR discussion of the impacts on Muni levels of service was done on a line-by-line basis for downtown serving lines, a method which is no longer used and is not comparable to the data included in the SEIR. A corridor analysis method for assessment of impacts on Muni was adopted about one and one-half years ago after the decision was made to stop assigning transit trips arbitrarily to one bus line rather than another traveling in the same corridor (e.g., from downtown to the Richmond District) since it is known that travelers choose different lines daily for a variety of reasons and that Muni shifts facilities to accommodate changing demands in the main corridors. Survey and other data provide enough information to statistically support the assignment of riders by general area of residence (e.g., northeast or southwest areas of the City), but data do not support as precise an assignment as is implied when a line-by-line analysis method is used.

BART

For both Eastbay and Westbay lines, the SEIR analyses have projected equivalent or lower passengers-per-seat ratios as compared to the projections of future conditions contained in the project's FEIR.

The FEIR concluded that:

"The proposed project would add 55 passengers (less than 0.3%) to the existing BART patronage and there would not be a measurable increase in these load factors." p. 34

Table 3 in the SEIR identifies a projected increase in BART ridership due to cumulative development ranging from 8,500 peak hour trips under the list-based analysis to 14,200 under the Downtown Plan EIR approach. Projected passengers-per-seat ratios (equal to load factors reported in the FEIR for BART) range from 1.07 on Westbay lines to 1.12 on lines bound for the Eastbay under the cumulative list approach, and from 1.06 on Westbay lines to 1.42 on Eastbay bound lines under the Downtown Plan EIR approach. Projected passengers-per-seat ratios under each approach take into consideration projected increased capacity.

AC TRANSIT

For AC Transit, the SEIR projected ridership increases ranging from 2,280 to 780 fewer trips than the FEIR.

The FEIR concluded that:

"The proposed project and cumulative development would generate about 3,680 trips, exceeding the 3,500-person capacity reserve. AC Transit staff indicate that capacity will be increased about 10% (to about 13,500 passengers) over the next three to four years, which will raise the capacity reserve. The projected patronage, including patronage from cumulative development outlined in Table D-1, Appendix D, page A-94, of about 13,200 persons could be accommodated within the system capacity. Each bus would have an average of 15-20 standees." p. 35

Table 3 in the SEIR identifies a projected increase in ridership on AC Transit ranging from 1,400 under the Downtown Plan EIR approach to 2,700 under the cumulative list methodology. This would result in passengers-per-seat ratios of 1.08 under the Downtown Plan EIR approach and 1.16 under the cumulative list approach.

GOLDEN GATE TRANSIT

For Golden Gate Transit, the SEIR projected a lower impact than the FEIR. Due to planned capacity increases, in the SEIR passengers-per-seat ratios are not projected to exceed 1.00, as compared to the FEIR where it is projected that riders would exceed seated capacity.

The FEIR concluded that:

"With a maximum capacity of 8,675 peak hour passengers, the effect of cumulative downtown development would be to raise patronage to about 8,600 passengers (99% of capacity). The proposed project would add 15 trips to the projected ridership (see Table 2, page 31)." p. 34

Table 3 in the SEIR identifies a projected peak hour ridership on Golden Gate Transit buses of from 6,800 under the cumulative list approach to 8,500 under the Downtown Plan EIR approach and corresponding passengers-per-seat ratios of 0.73 to 0.91 respectively. Under these analyses, it is projected that Golden Gate Transit would be able to meet the entire demand from cumulative development in downtown San Francisco.

CALTRAIN

Projections of impacts on the CalTrain lines are greater in the FEIR than in the SEIR. In both documents, the future ridership due to demand from cumulative downtown development could be accommodated within the projected available seated capacity of the system.

The FEIR concluded that:

"The proposed project and cumulative development from the projects included in Table D-1, Appendix D, page A-94, would generate about 2,015 new peak-hour passengers which could be accommodated without exceeding peak-hour capacity." p. 35

Both methodologies presented in the SEIR project future excess capacity on CalTrain lines with passengers-per-seat ratios ranging from 0.61 under the cumulative list analysis to 0.79 under the Downtown Plan EIR methodology.

SAMTRANS

For SamTrans, the FEIR and the Downtown Plan EIR analysis in the SEIR both project ridership in excess of capacity, while the list-based analysis in the SEIR projects capacity in excess of ridership demand.

The FEIR concluded that:

"With a maximum capacity acceptable to the District of 125% of available seats, it is estimated that there is a reserve capacity for 300 passengers. The patronage from the proposed project and cumulative development (755 passengers) would exceed the available 300-passenger reserve capacity of SamTrans. The proposed project would add about five passengers of the trips generated by new development (see Table 2, page 31)." p. 36

Table 3 of the SEIR identifies passengers-per-seat ratios of 1.19 under the Downtown Plan EIR approach and 0.88 under the list-based analysis.

3. Pedestrian Movement

The projected pedestrian flows were not provided in the FEIR. However, the FEIR concluded that "the cumulative effect of other development would be a degradation from unimpeded to impeded pedestrian flows on Market Street sidewalk during peak hours." The SEIR (Table 4) projects an increase in pedestrian flow during the noon peak hour which is still within the "unimpeded" flow regime, but an increase in the p.m. peak-hour flow rate which would degrade the flow regime from "open" to "unimpeded" during that period (see Table G-1).

4. Traffic

a. Regional Freeway Analysis.

The SEIR (Table 5) provides information on the project's contribution to future demand on Regional Auto Corridors, a type of analysis which was not part of the methodology used in the transportation analysis included in the FEIR, and thus no comparison is possible.

b. Intersection Analysis (Table 6).

The analysis of impacts on intersections are not comparable because a different set of intersections were analyzed in the FEIR and the SEIR. The locations nearest the project were analyzed in the FEIR because they were expected to be the intersections with the highest concentration of project-related traffic. However, in many cases, those

TABLE G-1: PEAK PEDESTRIAN VOLUMES AND FLOW REGIMEN ON MARKET STREET

		<u>Existing</u>			<u>2000</u>			<u>1984 + CUMULATIVE LIST</u>			<u>FEIR</u>	
		<u>p/f/m</u>	<u>Flow</u>	<u>Regimen</u>	<u>p/f/m</u>	<u>Flow</u>	<u>Regimen</u>	<u>p/f/m</u>	<u>Flow</u>	<u>Regimen</u>	<u>p/f/m</u>	<u>Flow</u>
<u>NOON PEAK HOUR</u>												
Market Street		0.7	Unimpeded		1.0	Unimpeded	11	1.06	Unimpeded	10	N/A	Impeded
Sidewalk												
<u>P.M. PEAK HOUR</u>												
Market Street		0.38	Open		.56	Unimpeded	14	.59	Unimpeded	14	N/A	Impeded
Sidewalk												

N/A - Not analyzed in the FEIR.

intersections fail to give a clear picture of the cumulative traffic impacts, while the intersections near freeway ramps are the sites of the highest concentration of cumulative p.m. peak traffic. Freeway-related intersections have thus been used in cumulative traffic analyses for San Francisco EIRs for several years. The freeway ramps most likely to include some measureable amount of project-related traffic were chosen for cumulative analysis in this Supplemental EIR.

5. Parking

The parking impact analysis in the FEIR and the SEIR are not comparable because the geographic area included as the basis for parking occupancy is different in the two documents. In the FEIR, the project parking demand was analyzed in relation to parking demand and supply within a 2,000 foot radius of the project site. In the SEIR, on the other hand, the project parking demand is analyzed in relation to parking supply and demand in the entire C-3 District.

AIR QUALITY

Air quality analyses in the FEIR and the SEIR addressed two issues: (1) projected daily pollutant emissions; and (2) projected worst-case curbside CO concentrations.

1. Daily Emissions

Because information in the SEIR on projected daily pollutant emissions was not provided in the FEIR, a comparison between the two is not possible.

2. Curbside Carbon Monoxide

Regarding carbon monoxide (CO), comparison is not possible due to the fact that locations measured in the SEIR were different compared to locations analyzed in the FEIR. In the FEIR, locations along Missions/8th and Market/8th Streets were measured for one- and eight-hour CO concentrations. In the SEIR, the intersections of 6th and Brannan, 5th and Bryant, and 8th and Bryant, all freeway ramp intersections, were measured for the same data.

HOUSING

Information in the SEIR (Table 9) on housing was not provided in the time of the FEIR and thus is not available for comparison purposes.

ENERGY

Information in the SEIR on energy was not provided at the time of the FEIR and thus is not available for comparison purposes.

